

THE ENDOCRINOLOGIST

THE MAGAZINE OF THE SOCIETY FOR ENDOCRINOLOGY

‘Let’s talk about hormones’

HOW TO SUCCEED IN PUBLIC ENGAGEMENT

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A word from THE EDITOR...



As a bunch, I reckon most of us would consider ourselves to be of a quantitative disposition. We like error bars, n numbers, units, axes and replicates. Like any discipline that seeks to bring clarity to complex situations, this codifying is essential to having meaningful interactions with colleagues.

But what of communication with the non-specialist? I am reminded of an interaction that one of my esteemed colleagues once had when being interviewed for television. Thinking it reasonable to sketch out a simple X-Y graph to illustrate hormone level varying with body mass, the proceedings came to an abrupt halt with a producer bawling that his show 'was not the bl**dy Open University'.

Consider this bumper issue to be your essential navigation guide to the choppy media sea, keeping you out of trouble, with a fighting chance of getting a sane message across. The wonderful people in the Society's press office have assembled the collective wisdom of 'colleagues' in a series of 'top tips'. Endocrinology's very own media superstar, Giles Yeo, brings tales from the studio floor, while Holly Squire from the excellent website 'The Conversation' tells you how to combine academic rigour with journalistic flair and why we still really *do* need experts.

We have some superb pieces on how to meaningfully engage with the wider public, and how members of the Society have successfully reached out to younger people to inspire the next generation of endocrinologists. A report on a fascinating collaboration between endocrinologists and film-makers puts a whole new spin on the chemistry of romance.

Also in this issue, folk from across the Society community give you snippets of what to look forward to at this year's Society for Endocrinology BES conference. The final words go to Malcolm Peaker and his piece on 'Medawar's dictum on endocrine evolution', reminding us that whether you are tweeting, googling, writing or speaking, words have always mattered.

BEST WISHES

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www.endocrinology.org/endocrinologist

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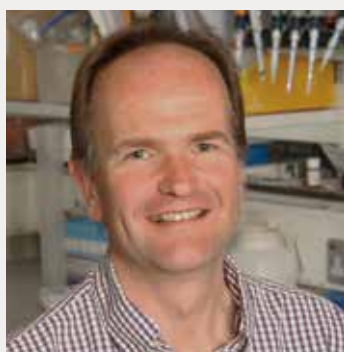
Become a contributor... Contact the Editorial office at endocrinologist@endocrinology.org

The Society welcomes news items, contributions, article suggestions and letters to the Editor. We would also like to hear your feedback on this issue of the magazine.

Deadline for news items for the Winter 2016 issue: **26 September 2016**.

Deadline for news items for the Spring 2017 issue: **1 December 2016**.

Front cover image ©SHUTTERSTOCK



NEW PRESIDENT TAKES THE REINS

At the next AGM, which will be held at the Society for Endocrinology BES conference in November, Professor Graham Williams will take over from Professor Sir Stephen O'Rahilly as President of the Society.

DON'T MISS OUT ON YOUR BENEFITS!

Make sure your access to membership benefits is uninterrupted, and take the hassle out of renewing your annual subscription to the Society by using a direct debit. Convenient, secure and easy to set up, a direct debit ensures you have continuous access to the benefits of membership every year.

Contact members@endocrinology.org for a direct debit form today.

TEXTBOOK DISCOUNT FOR MEMBERS

Oxford University Press is offering Society members a 20% discount on all books in medicine until December 2016. Log in to the Members' Area at www.endocrinology.org to obtain your discount code.

SOCIETY'S NEW WEBSITE

Over the past year, we've been hard at work developing a new website for the Society for Endocrinology. We hope it will make it easier for us to engage and support both members and the wider public. Our new website will launch shortly, so keep an eye on www.endocrinology.org and let us know what you think of our new look.



SOCIETY JOURNAL TO PUBLISH VIDEOS

Do you use advanced imaging techniques to produce videos or time-lapse photography? Do you study real-time intracellular trafficking or produce 3D reconstruction of molecules? *Journal of Molecular Endocrinology* now offers the ability to publish inline videos that play in the online version of your published article, adding an extra dimension to readers' engagement with your work. We are offering all accepted authors who include video as part of their submission a free open access publication (usually £2,700) when they submit their work before 31 December 2016. Visit www.try-jme.org to submit your work.

YOUR 'MEMBERS' AREA' IS CHANGING SOON!

Are your details up to date?

Moved organisation?

New contact details?

Log on to the members' area at www.endocrinology.org today to update your contact details, preferences and even your Endocrine Network membership.

SOCIETY CALENDAR

7-9 November 2016
SOCIETY FOR ENDOCRINOLOGY BES CONFERENCE 2016
Brighton

19-21 March 2017
CLINICAL UPDATE
Birmingham

20-21 March 2017
ENDOCRINE NURSE UPDATE
Birmingham

www.endocrinology.org/meetings for full details

SOCIETY SUPPORTED EVENTS

17 October 2016
REGIONAL CLINICAL CASES MEETING
Cambridge

1 December 2016
REGIONAL CLINICAL CASES MEETING
Manchester

GRANT AND PRIZE DEADLINES

30 SEPTEMBER 2016
PUBLIC ENGAGEMENT GRANTS

27 NOVEMBER 2016
EARLY CAREER GRANTS

27 NOVEMBER 2016
EQUIPMENT GRANTS

15 DECEMBER 2016
TRAVEL GRANTS

www.endocrinology.org/grants for full details of all Society grants

CONGRATULATIONS... ...to the following Society members:

Anna Dominiczak (Glasgow) has been appointed Dame Commander of the Order of the British Empire in the recent Queen's Birthday Honours, in recognition of her services to cardiovascular and medical science.

Waljit Dhillon (London) has been appointed National Training Lead for NIHR Infrastructure, overseeing doctoral training in UK Biomedical Research Centres.

Channa Jayasena (London) is giving the President's Lecture of the Biology Section at the British Science Festival, with a talk entitled 'Social egg freezing: fad or fact?'

Kevin Murphy (London) has been appointed Professor of Endocrinology and Metabolism.

Philippa Saunders (Edinburgh) has been elected as the new Registrar for the Academy of Medical Sciences.



Anna Dominiczak
©University of Glasgow

SOCIETY FOR ENDOCRINOLOGY OFFICIAL JOURNALS

Society members have free access to the current content of *Journal of Endocrinology*, *Journal of Molecular Endocrinology*, *Endocrine-Related Cancer* and *Clinical Endocrinology* via the members' area on the Society home page, www.endocrinology.org. *Endocrine Connections* and *Endocrinology, Diabetes & Metabolism Case Reports*, the Society-endorsed case reports publication, are open access (OA) and free to all.



JOURNAL OF ENDOCRINOLOGY

hCG-induced hyperprolactinaemia and metabolic disturbances

Several studies have linked dysregulation of prolactin-mediated signalling with an imbalance in metabolic parameters. Ratner *et al.* explored the effects of prolonged hyperprolactinaemia in female mice and dysregulation of the hypothalamic-pituitary-gonadal (HPG) axis, achieved by transgenic overexpression of the β -subunit of human chorionic gonadotrophin (hCG β) on an array of metabolic parameters, including lipid profile, insulin and glucose tolerance tests and pancreatic gene expression.

Transgenic animals with dysregulation of the HPG axis and hypersecretion of prolactin had higher circulating insulin, showing reduced insulin sensitivity with an elevated HOMA-IR (homeostatic model assessment of insulin resistance). Lipid and pancreatic markers were also significantly altered in females with elevated hCG β . These effects were reversible using the dopamine agonist cabergoline, showing the direct effects of prolactin, and suggesting a link between prolactin and gonadotrophin hormone functionality and metabolic status.

Read the full article in *Journal of Endocrinology* **230** 157–169

JOURNAL OF MOLECULAR ENDOCRINOLOGY

Transcriptome landmarks of rat beta-cell maturation

Small, critical windows of time during development often determine lifespan physiological functions. Of increasing interest is the *in vitro* generation of insulin-secreting cells to treat type 1 and type 2 diabetes mellitus. This fascinating and meticulous study by Larqué *et al.* investigated the postnatal maturation of rat pancreatic beta-cells.

Microarray analysis of fluorescence-activated cell-sorted (FACS) beta-cell-enriched populations obtained from neonatal, suckling, weaning and young adult rats was performed. The authors identified changes in a variety of gene sets that play important roles in the maturation process, including the regulation

of insulin secretion, energy metabolism, calcium channel activity and cell proliferation. The transcriptomic changes related to maturation of insulin secretion and integration of energy metabolism were confirmed following glucose stimulation. The level of the response correlated with the postnatal developmental stage of cells. Likewise, T-type calcium currents correlated with development. The data also indicated that maturation may be associated with a reduction in cell proliferation.

This study highlights that elucidating the molecular control of insulin secretion and the cell cycle in pancreatic beta-cell maturation could bring opportunities in novel therapeutic approaches to diabetes.

Read the full article in *Journal of Molecular Endocrinology* **57** 45–59

ENDOCRINE-RELATED CANCER

Loss of *Pten* in mice promotes thyroid cancer

For patients with follicular thyroid cancer, recurrent and metastatic carcinoma remains challenging. *In vitro* studies using suberoylanilide hydroxamic acid (SAHA; vorinostat, a histone deacetylase inhibitor) were promising, but in clinical trials tumours were resistant or, worse, the cancer progressed.

Zhu *et al.* used mouse models that spontaneously develop follicular thyroid cancer; *Thrb^{PV/PV}* with a dominant negative thyroid hormone receptor and *Thrb^{PV/PV}Pten^{+/-}* with haplodeficiency of the *Pten* tumour suppressor. In *Thrb^{PV/PV}Pten^{+/-}* mice, SAHA increased thyroid weight and tumour progression (increased capsular and vascular invasion and lung metastasis); what could be the mechanism?

Thrb^{PV/PV} mice demonstrate constitutive activation of phosphatidylinositol 3-kinase (PI3K)-AKT and *Pten* haplodeficiency further overactivates PI3K-AKT signalling. In *Thrb^{PV/PV}Pten^{+/-}* mice, SAHA treatment reduced *Pten* protein further as a result of loss of the wild-type *Pten* allele, which was key in increasing PI3K-AKT signalling and driving cell cycle progression.

It's intriguing that SAHA didn't alter *Pten* levels in *Thrb^{PV/PV}* mice and highlights the importance of cellular context and genetic make up of cancer cells in determining treatment responses. The data suggest that a combination treatment of SAHA with agents targeting PI3K-AKT could be beneficial.

Read the full article in *Endocrine-Related Cancer* **23** 521–533



ENDOCRINE HIGHLIGHTS

A summary of papers from around the endocrine community that have got you talking.

Prevalence of thyroid disorders linked to iron deficiency during pregnancy

Iron deficiency in pregnant women is associated with multiple obstetrical and foetal complications, including miscarriage and pre-term birth. Iron is also an important component of thyroid peroxidase, an enzyme essential to the correct functioning of the thyroid. Adequate thyroid hormone during pregnancy is needed to ensure the correct development of the child's brain.

Veltri *et al.* compared the prevalence of thyroid autoimmunity and dysfunction in pregnant women with and without iron deficiency, by studying 1,900 Belgium women during their first trimester. They found 35% of the women were iron deficient, with levels of thyroid autoimmunity significantly higher in the iron deficient group.

This relatively high level of iron deficiency experienced by women in a country with access to good medical care illustrates that iron deficiency during pregnancy remains an important public health issue to all. This study also highlights the need for appropriate antenatal checks to ensure correct thyroid function and suitable iron levels.

Read the full article in *European Journal of Endocrinology* 2016 **175** 191–199

CLINICAL ENDOCRINOLOGY

Symptoms of subclinical hyperthyroidism in older women

Approximately 50% of cases of subclinical hyperthyroidism (SCH) are aged ≥ 65 years, with serum thyrotrophin (TSH) >0.1 mIU/L, but most studies focus on those under 65, or those whose TSH is suppressed to ≤ 0.1 mIU/L.

Rosaria *et al.* analysed 90 women aged 65 or older with mild SCH, and 90 euthyroid controls matched for age and body mass index. They evaluated symptoms of thyrotoxicosis, markers of bone turnover and bone mineral density (BMD), and performed 72-h ECG monitoring to look for occult atrial fibrillation (AF). Patients whose serum TSH normalised within 3 months, who had nodular

thyroid disease, or who had other conditions that could affect BMD were excluded.

No difference was found in subjective symptoms of thyrotoxicosis between groups, or in serum concentrations of bone turnover markers or BMD at the femoral neck or lumbar spine. Nor was there a difference in incidence of AF between the two groups. The authors acknowledge that the duration of SCH was unknown, and that long-standing mild SCH may have adverse effects, but reassure that immediate treatment of SCH is unnecessary.

Read the full article in *Clinical Endocrinology* **85** 132–136

ENDOCRINOLOGY, DIABETES & METABOLISM CASE REPORTS

Aripiprazole in the treatment of prolactinoma

Prolactinomas that coincide with concomitant psychotic disorders can prove a considerable challenge to treat. A number of dopaminergic drugs are the standard therapeutic treatment for prolactinoma, but their side-effects include aggravating psychotic symptoms. Meanwhile, patients with psychotic disorders are mostly treated with dopamine receptor D_2 antagonists, which can increase prolactin levels.

Bakker *et al.* report on the case of a 30-year-old woman who presented with a 2-year history of headaches and amenorrhea. She also had a 6-year history of depressive symptoms. Further tests found an elevated prolactin level of 2.25 IU/L and an 8mm pituitary microadenoma.

Following treatment with a series of dopaminergic drugs, the team struggled to balance the improvements in her pituitary disease with changes to her psychotic health. The patient was commenced on aripiprazole, a relatively novel antipsychotic drug, not associated with an increase in prolactin levels. Over a 10-year follow up, the authors report that use of this drug led to improved psychotic symptoms, normalised prolactin levels and a decrease in prolactinoma size. They conclude that aripiprazole can be a valuable pharmaceutical tool to treat both prolactinoma and psychosis.

Read the full article in *Endocrinology, Diabetes & Metabolism Case Reports* 2016 **6** EDM-16-0028 (OA)

ENDOCRINE CONNECTIONS

A new biomarker for neuroendocrine tumours?

The hormone ghrelin is produced predominantly by gastric X/A-like neuroendocrine cells, and exists in acylated (AG) and unacylated (UAG) forms. Acylation is necessary to activate the ghrelin receptor GHSR1a *in vivo*, but UAG could also act as a hormone independently from AG. Ghrelin's function in neuroendocrine tumours (NETs) is not well understood, although levels correlate positively with tumour burden, and hyperghrelinemia has been described in patients with NETs.

Van Adrichem *et al.* investigated whether AG and UAG levels could be potential biomarkers in patients with NETs. Fasting serum AG and UAG levels were

compared between 28 non-obese, non-diabetic NET patients and their matched controls, and these were analysed alongside additional biochemical and clinical parameters.

There were no significant differences in plasma AG and UAG levels between NET patients and their matched controls, indicating these have no utility as diagnostic biomarkers in these patients. The authors suggest that hyperghrelinemia in NET patients is not the result of hypersecretion from the tumour itself, and that a 'ghrelinoma syndrome' does not exist.

Read the full article in *Endocrine Connections* **5** 143–151 (OA)



©University of South Florida/USF Health

Effects of stress on host-vector interactions

Stress hormones could represent an important link between individual-level infection outcome, population-level parasite transmission and zoonotic disease risk. Although much work has been conducted on how stress affects an individual's immunity, we know relatively little about how stress can affect host-vector interactions.

In this study, Gervasi *et al.* examined a host-vector system made up of *Culex* mosquitoes (which transmit the West Nile virus) and a common host species, the songbird *Taeniopygia guttata* or zebra finch. They manipulated the birds' stress levels to assess what effect this had on the mosquitoes' feeding behaviour.

Birds with higher corticosterone levels were twice as likely to be fed on by the mosquitoes compared to controls, despite these birds showing more defensive behaviours to avoid being bitten. These mosquitoes subsequently went on to lay different clutch sizes at different rates compared to mosquitoes that only fed on control birds.

Although the biological mechanisms through which these findings are mediated are unclear, it provides us with an intriguing insight into how host stress can affect the transmission dynamics via multiple pathways.

Read the full article in *Proceedings of the Royal Society B* 2016 doi:10.1098/rspb.2016.1278

CAR therapies for ovarian cancer

Ovarian cancer treatment has advanced little over the last 40 years, and the disease leads to over 14,000 deaths annually in the USA. Autologous T cells expressing chimaeric antigen receptors (CARs) have had remarkable results in chemo-resistant haematological malignancies. But CAR therapies need specific targets, expressed only in the tumour cells and not in the healthy tissue. Until recently, follicle-stimulating hormone receptors (FSHRs) were thought to only be expressed in ovarian granulosa cells, but it is now known that FSHRs are expressed in 50–70% of ovarian carcinomas, making them an ideal therapeutic target.

Perales-Puchalt *et al.* generated human FSH chimaeric endocrine receptors (FSHCERs) and expressed them in T cells. These were shown to kill ovarian cancer (OVAR-3) target cells and FSHR⁺ CaOV3 ovarian cells in immunodeficient mice. Potential *in vivo* toxicity in healthy tissue due to unknown FSHR expression was analysed using a mouse FSHCER construct, which showed no obvious adverse effects.

This indicates that T cells redirected with FSHR-targeted chimaeric receptors could be a safe and effective treatment against aggressive ovarian malignancies.

Read the full article in *Clinical Cancer Research* doi:10.1158/1078-0432.CCR-16-0492

Controlling the stress response: a new hypothesis

The glucocorticoid receptor (GR) binds to over 10,000 sites in the human genome, but is only known to regulate the expression of hundreds of genes. In this paper, Vockley *et al.* set out to discover the reason behind this discrepancy. To determine this, they measured the glucocorticoid (GC) responsive activity of nearly all GR binding sites (GBSs) captured using chromatin immunoprecipitation.

They found that only 13% of the sites assayed exhibited GC-induced activity. However, the 87% of sites that showed no GC-induced activity seemed to predominantly have epigenetic features of steady-state enhancers and were clustered around direct GBSs.

The authors hypothesise that their data support a model in which these clusters reflect interactions between direct and tethered GBSs over tens of kilobases. These interactions may synergistically modulate the activity of direct GBSs, and could therefore play a major role in driving gene activation in response to GCs and lead to a wider variety of stress responses that was previously thought.

Read the full article in *Cell* 2016 doi:10.1016/j.cell.2016.07.049

PUBLIC ENGAGEMENT: BRINGING THE WORK OF ENDOCRINOLOGISTS TO LIFE

WRITTEN BY SOPHIE DUNCAN



Imagine going to a party and telling someone about your work as an endocrinologist. Where does the conversation take you? What captures people's interest? How do people make sense of what you do, and relate it to their own experiences, or the experiences of those they love?

'Public engagement' is an umbrella term covering the multifarious ways that researchers engage with people outside their institution. At the heart of public engagement we find people coming together and identifying common ground. Often enjoyable, sometimes challenging, engagement opens up new connections and can enrich your work. So surely it should be easy!

MOTIVATIONS AND CHALLENGES

Over the past decade, researchers have faced increasing pressure to engage with the public. Motivations are many: wanting to develop impact, inspiring young people, improving quality of research, encouraging behavioural change, developing new skills etc. However, the importance of public engagement is not restricted to researchers. Community engagement and patient and public involvement each have increasingly important roles to play for clinicians. Whilst a recent study suggests 82% of researchers have engaged with the public over the last 12 months,¹ there are challenges, including the time available and the pressure of other academic pursuits. The academic culture is not always conducive to engagement.

The funders of research are well aware of these challenges, and increasingly look to support researchers to engage. The *Concordat for Engaging the Public with Research*² sets out funder expectations as to how researchers should be supported. It highlights the importance of reward and recognition, training and development, learning and support, and providing opportunities for researchers to 'dip their toe' in the water – or to take part in more ambitious programmes. At the core of the *Concordat* is the expectation that the universities, clinical settings or research institutes where researchers work will commit to the importance of engagement. Without that strategic commitment, it is hard for engagement to thrive.

SUCCESS STORIES

So what does excellence in engagement look like? The finalists of our National Engage Competition³ provide a snapshot of the diverse approaches:

- **Conker Tree Science** – school children worked with researchers to investigate an invasive species.
- **Bright Club** – researchers did stand-up comedy in front of a paying audience.
- **Everyday Heroes of Postman's Park** – an interactive app enabled people to investigate the stories of individuals commemorated in a local memorial.
- **Dance for Parkinson's** – research findings informed development of dance sessions for those with Parkinson's.
- **What If?** – school children worked with researchers to explore where their questions could take them.
- **Caer Heritage Project** – local people and researchers worked together to investigate a local hill fort.

These projects illustrate the hallmarks of great engagement, namely:

- Mutual benefit: for the people who participate, and for you and your research.

- A clear purpose: within one or more of these overarching themes:
 - **Listening** – whether through consultation or advisory groups, engagement can provide a wealth of insights and new thinking
 - **Inspiring** – finding accessible and engaging ways to bring your specialist knowledge to life
 - **Collaborating** – really respecting the expertise and experience of (for example) a patient group, and finding constructive ways to work together to get things done.
- Thinking carefully about the 'who': it's easy to talk about 'the general public', but great engagement is usually animated by a careful approach to considering who to involve and their motivations and expertise.
- Effective use of evaluation: to ensure you plan effectively, tailor your activities to the interests of those you want to engage, and assess how you have delivered against your purpose.

'Public engagement, when done well, can have an impact on you, your research and practice, and those you engage with. It can be challenging, but it can also be enormously rewarding'

LOOKING FOR HELP?

A lot of advice and support is available to help develop your engagement work, or a culture that supports it.

The National Co-ordinating Centre for Public Engagement (NCCPE) works nationally, offering consultancy, training, online resources and events, including our annual Engage Conference in Bristol (29–30 November 2016; www.publicengagement.ac.uk/work-with-us/engage-conference).

Learned societies, such as the Society for Endocrinology, provide funding, support and opportunities. Your own institution may also have a public engagement co-ordinator or team. For those of you interested in patient and public involvement, Involve (www.invo.org.uk) provides excellent advice.

Public engagement, when done well, can have an impact on you, your research and practice, and those you engage with. It can be challenging, but it can also be enormously rewarding. It could be as easy as just starting a conversation about your work. Why not give it a go – who knows where it might lead?

SOPHIE DUNCAN

Deputy Director, National Co-ordinating Centre for Public Engagement

The NCCPE (www.publicengagement.ac.uk) supports universities and research institutes in their engagement with the public. It is funded by Research Councils UK, the Higher Education Funding Councils and the Wellcome Trust, and hosted by the University of the West of England and the University of Bristol.

REFERENCES

1. TNS-BMRB & Policy Studies Institute 2015 *Factors Affecting Public Engagement By Researchers* <http://bit.ly/2aTqZuI>.
2. Research Councils UK *et al.* 2012 *Concordat for Engaging the Public with Research* www.rcuk.ac.uk/pe/Concordat.
3. NCCPE 2016 *Engage Competition Finalists* <http://bit.ly/2aJKUCB>.

SUPPORTING YOU TO ENGAGE



WRITTEN BY MARALYN DRUCE

The Society for Endocrinology has a principal aim ‘to engage the public with endocrinology and its impact’.


We want people to be able to make better informed decisions about their health, and we are committed to disseminating accurate, high quality information about hormones to the public.

It’s only by supporting you, our members, to participate in effective public engagement activities that will we achieve this goal. This engagement could be through the media, hands-on activities, public discussions or via


websites and online tools. You will find many examples discussed in this issue of *The Endocrinologist*.

Through the Society’s 2015 member survey, you said you believed it was important for the Society to engage with the public. You asked for more information, more training and more opportunities to get involved. The Society is committed to providing the following support to its members.




INFORMATION AND TRAINING 

- Providing you with information about public engagement and advice about using it to achieve your aims
- Introducing you to how the news media work
- Developing your communication/presentation/writing skills
- Helping you get the most out of hands-on public engagement activities (see the ‘survival guide’ on page 17)

MATERIALS 

- Working towards shared resources, such as tried and tested hands-on activity templates
- Developing user friendly online information about hormones via a website that you can signpost and share: ‘You and Your Hormones’ (see page 22)

SUPPORT 

- Facilitating requests from journalists (see ‘Top tips for working with the media’ on pages 10–11)
- Funding your initiatives through our Public Engagement Grant scheme
- Advising you on shaping and promoting your public engagement initiatives

OPPORTUNITIES 

- Delivering hands-on activities at Society public engagement events
- Working with us to develop discussion events at festivals
- Introducing you to journalists by being a Society ‘media expert’

Look out for further information, which is coming soon on our website, or get in touch with Jo Stubbs or Omar Jamshed in the Society’s communications office at media@endocrinology.org.

If you are interested in joining the Public Engagement Committee, opportunities are highlighted in emails and on our website.

MARALYN DRUCE
Chair, Society for Endocrinology Public Engagement Committee

HOW TO ‘DO’ TV

WRITTEN BY GILES YEO

Increasingly, when we apply for grants or promotion, we are asked to define our ‘pathways to impact’ in the former and to describe our actual impact in the latter. A significant portion of this impact will involve public engagement, which often seems a waste of time to many of us. However, it is useful to remember that, while only 0.00001% of the population will ever read our papers, the other 99.9% pay for our salaries and fund our research. I would therefore argue that it is our duty to engage with the public and let them know, particularly in these times of financial uncertainty, what their tax £/€//\$s are being spent on.

In recent years, my public engagement ‘weapon of choice’ has been TV broadcasting. I started small, with brief appearances as a ‘talking head’. Then, through a series of serendipitous events, it has – unexpectedly and at great speed – snow-balled into a full-blown presenting gig.

While the vast majority of you would shudder at the thought of having your body mass index and body fat percentage measured and broadcast on national TV (which I did for the BBC’s ‘Horizon’; I can report that my wife was *thrilled*), many of you will be interviewed on camera for your expert opinion at some point in your careers.

WHEN THE PHONE RINGS...

There are two distinct stages to consider when you first receive that phone call asking for your opinion on some contemporaneous finding.

The first and most important is to refine your message. Is it couched in the appropriate language for your target audience? Are you being interviewed

The BBC Horizon film crew setting up to film Giles on location in Boston.

©G. Yeo



for Channel 5, Sky, Channel 4, BBC1, BBC2 or BBC4 (I list these in order of increasing editorial sophistication)? Is it succinct enough? This is critical, as will become clear below.

The second and, to many, most nerve-racking, is filming day. I thought it would be useful to demystify the process a little, so that when your moment in the spotlight arrives, you’ll find it easier to concentrate on preserving the message you are trying to convey to the public.

IN FRONT OF THE CAMERA

While there is much artistry in the framing of shots and in the editing, the actual mechanics of filming a sequence are quite standard.

- (a) There will be ‘set up’ shots. These either set up the relationship between you and the presenter or, where there is no presenter, you as the expert in your lab/ward/office with a pipette/stethoscope/computer.
- (b) Then comes the filming of the interview. This will almost always be done with only one camera and, since you are the expert in residence, will begin with you. You will be instructed to ignore the camera and face about 5° off the lens (only the presenter ‘breaks the fourth wall’ and speaks to the camera). When asked a question, you will of course reply in a typically nuanced and fully caveated fashion. The director, perhaps sporting a (wo)man-bun or hipster-jacket or both, might say, ‘that was wonderful, well put, how eloquent ... now shorter’. This process is repeated interminably until your initially carefully crafted answer is converted into Haiku, e.g. ‘Fat is bad’. The camera will then turn to the presenter (if present) and film him/her asking the questions and nodding in a sage fashion. This is called ‘filming singles’.
- (c) The final part of the process is filming the non-synchronised wide shots (‘non-sync wides’) and general views (‘GVs’). Non-sync wides are artistic shots taken from a distance, typically of you and the presenter sitting and talking, but where no synchronised sound is being recorded. GV’s are atmospheric shots relevant to the locale and topic of the interview, and won’t involve you.

‘The vast majority of you would shudder at the thought of having your body mass index and body fat percentage measured and broadcast on national TV’

You will of course reply in a typically nuanced and fully caveated fashion. The director might say “now shorter”. This process is repeated until your initially carefully crafted answer is converted into Haiku, e.g. “Fat is bad” ’

All of this footage is then edited down into one seamless sequence. What will surprise you is that, while the whole process might have taken half a day, this only equates to about 1–2 minutes of actual broadcast material.

SHORT AND SWEET

This is why it is absolutely critical that you have your message in a succinct form. With only 1 minute of screen time, the director is looking for your best and most relevant sound bite (although they never actually announce this to you). So resist the temptation to blab on, otherwise the piece of

information that is edited and used may not fully reflect the message you want to get across, or indeed mention it at all.

If, however, you have already refined your messages into sound bites (of under 10 seconds – I am not kidding), and you keep repeating these throughout the interview, then they are more likely to be used unedited. This is a very useful strategy that I picked up early on in order to maintain some editorial control in a process which is inherently uncontrollable (to us experts at least).

Of course, this can all be quite stressful and is clearly not to everyone’s taste and disposition. If, however, it is suited to your temperament, and is handled correctly, then the potential audience reach – and therefore your impact – could be very large indeed.

GILES YEO

MRC Metabolic Diseases Unit, University of Cambridge

Twitter: @GilesYeo

Giles has appeared on several BBC TV programmes, including ‘Horizon: Why are we getting so fat?’ (<http://bbc.in/29HOW6z>) and ‘Horizon Special: What’s the right diet for you?’ (<http://bbc.in/29wf7zV>).

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TOP TIPS FOR WORKING WITH THE MEDIA

WRITTEN BY AMELIA NEWMAN



Working with the media is increasingly important for today's scientists. Regardless of our engagement with it, the media wheel keeps turning and remains an extremely effective way to communicate science to a huge audience. By working in partnership with the media, whether to inform or inspire, you have a unique opportunity to raise the profile of your work and institution, and to challenge misrepresentation.

Many still shy away from media collaboration, because of preconceptions and the nature of the industry. The fast turnover and need for a story – as well as absolute answers – don't always lend themselves well to communicating accurate science. Furthermore, forming an educated statement under pressure can be challenging. However, it is important to appreciate that, despite these factors, the

media provide invaluable channels for getting good – and bad – science into the public eye.

By anticipating the needs of journalists, you will be able to work confidently and effectively with the media. Here, our members give you their top tips.

1. TIMING IS EVERYTHING

To the media, a story is a story, no matter who comments on it – and time to comment on breaking news is short.

“Remember journalists work to incredibly tight deadlines, so if you want the voice of endocrinology to be heard, you can't keep them hanging on. Richard Quinton”

2. PREPARATION IS KEY

With each story, you usually have one opportunity to get your point across. Being well prepared allows you to communicate your message confidently and effectively.

“Consider which one or two key points you wish to get across, and make sure you do! Ashley Grossman

Practise! The first interview I did was terrifying but interesting at the same time. I have since been asked back. Helen Simpson

Reporters always like to know how many people are affected by the condition you are discussing. Think about this beforehand. Channa Jayasena”

3. KNOW YOUR AUDIENCE

Recognising who the story is targeting is key to ensuring you communicate effectively.

“Gauge your response according to the type of medium: a story on a new drug for The Financial Times is not the same as commenting to Grazia... Ashley Grossman”

6. DON'T TAKE IT PERSONALLY

If your comment gets cut from an article, it's nothing personal; editors are ruthless and news schedules change.

“If your quote is not used, don't be offended... The news cycle moves rapidly and is continually changing. Helen Simpson

They may spend a day recording for a documentary and then cut it out completely. It happened to a colleague of mine who was participating in “The Fantastical World of Hormones”. Saffron Whitehead”

4. REMEMBER YOU ARE THE EXPERT

Remember that the journalist has contacted you for a reason, so don't be afraid to offer your expert opinion! It's better they get a comment from you than from another, less informed source.

“Say yes! Be confident about your knowledge! If we don't engage with journalists about endocrine news stories, someone else will control the information in the media. If only stories about crushed yams are available to the public regarding HRT, we will only have ourselves to blame. Helen Simpson”

However, remember the reporter is the expert in journalism. They know what will make a compelling story. Your job is to provide the correct scientific information to allow them to do this accurately.

“Remember you are doing a media piece, not writing your own paper. Don't expect to see an article before it is published. We give the information but are not writing the story. Let the journalists to do that. Helen Simpson”

5. FIND OUT WHAT THE STORY IS

Journalists have a variety of reasons for requesting an expert's opinion. They often come to you with a good idea of their angle for the piece; it is useful to know this beforehand.

“The media are often helpful but occasionally have an agenda – no matter how experienced you are, this can be difficult to see. Mark Vanderpump

...knowing this helps you to understand their line of questioning, and helps you answer the question! Channa Jayasena

Check what they really want. If it is to sensationalise a story, or to twist it to make their own point, politely refuse to get involved. Ashley Grossman”

7. STICK TO THE FACTS

Remember the journalists you will talk to don't usually have a science background. As a science and medical specialist, it is your job to help them understand the research – this is one of your biggest responsibilities!

“ *There is a lot of misleading information out there, so we have a duty to ensure the correct facts are available. Mark Vanderpump*

Be honest about how confident you are of your information. If you are asked about a topic where the research hasn't yet provided a clear answer, say so. Better to be cautious and correct than confident and wrong! Channa Jayasena

Be prepared to step back and admit that you don't have all the answers but offer to go away and find the answers for the interviewer. Neil Gittoes

Don't expect journalists to always do the right thing ... all you can do is to make it as easy as possible for them to do so. Richard Quinton ”

8. ASK FOR SUPPORT

Press officers are there to support you, so that you feel confident and comfortable when approached by the media. They can help you look at your work from a wider perspective.

“ *Don't go it alone; make sure that the Society for Endocrinology media office is involved. Richard Quinton*

If you are interested, get some media training. I attended a course run by the Science Media Centre which was great. Helen Simpson ”

AMELIA NEWMAN

Communications Intern, Society for Endocrinology

The Society for Endocrinology press office is always available to help and advise you on working with the media. The press officers, Jo Stubbs and Omar Jamshed, can be reached on **+44 (0)1454 642252** or **+44 (0)1454 642206**, or at media@endocrinology.org.

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New Clinical Endocrinology Trust funding for quality improvement projects

The Clinical Endocrinology Trust (a charity which derives its income from a profit-share of the Society's official clinical journal, *Clinical Endocrinology*) has long supported endocrine audit projects within the UK. Recent examples include:

- the UK Acromegaly Register
- the CaHASE audit of adults with congenital adrenal hyperplasia
- the national audit of cabergoline and valvulopathy
- the British Thyroid Association study of teenage iodine status across the UK

The Trustees now invite further applications from societies or endocrine centres, with preference given to projects involving multicentre collaborations. We are particularly interested in

applications related to areas of endocrinology that the Trust has not supported previously.

A total of £50,000 is available during 2016–2017 for a number of projects judged by the Trustees to be worthy of support. Previous funding has been in the range of £10,000–20,000 per project. The decision of the Trustees will be final. Projects must begin within 6 months of an award being made. An abstract describing the outcome of any supported project should be submitted to the Society for Endocrinology BES conference within 24 months of the award.

Contact Professor S Ball, Manchester Royal Infirmary, Manchester M13 8WL (Email: s.ball@manchester.ac.uk; Tel +44 (0)161 2765791) for an application form, which should be returned to the same address. The closing date is 30 October 2016.

We look forward to hearing from you!

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NAVIGATING A 'TWO-WAY STREET': PUBLIC INVOLVEMENT IN HEALTH RESEARCH

WRITTEN BY LAMIECE HASSAN



Recognising the valuable insights that patients, carers and the wider public can bring, public involvement is increasingly regarded as an essential component of designing and delivering health research, increasing its relevance, quality and impact. Nonetheless, despite a growing body of evidence about the theory and practice of public involvement, uncertainties remain about how to do it well.

EXPERTS BY EXPERIENCE

It is a clear, bright morning in June at a research design workshop held by The University of Manchester. Although the break has just been announced, one small group remains huddled in discussion, seemingly oblivious to those rising from their seats around them. Before them are a series of scientific papers, graphs and tables. One man leans in, eagerly tapping the pages to point out trends and outliers in the data. He seems well-informed about type 1 diabetes, and so he is. As a patient, he has lived with the condition for over 50 years, and has conducted his own research using publicly available data.

'Rather than providing data, people who are involved in research provide insight, advice and expertise based on their own lived experience of health conditions and/or services'

Patients and researchers come together at a workshop to discuss future research angles for using online self-monitoring tools for diabetes and chronic kidney disease. ©L. Hassan



'Under the right circumstances, public involvement can improve the quality and impact of research'

At today's event, people with diabetes, chronic kidney disease or both conditions (as the two often coincide) have been invited to discuss the future of online self-management tools for patients. Expert patients and researchers are facilitating the discussions side by side, learning from each other and hoping to gain insights into what types of research and development on such systems might be most relevant and useful.

WHAT IS (AND ISN'T) PUBLIC INVOLVEMENT?

INVOLVE – part of the National Institute for Health Research and a high profile advocate of public involvement in research – defines involvement as 'research being carried out "with" or "by" members of the public rather than "to", "about" or "for" them'. Crucially, this distinguishes involvement from taking part in research as a participant. Rather than providing data, people who are involved in research provide insight, advice and expertise based on their own lived experience of health conditions and/or services from their perspectives as patients, family members or carers.

Some people distinguish public *involvement* from public *engagement*. The latter term is typically used to describe activities that promote awareness and discussion about health and research. Nonetheless, others have argued that the distinction should not be made too sharply, given that both can involve dialogue, mutual learning and collaboration.

CRITICAL FRIENDS, MUTUAL BENEFITS

There are moral, ethical and practical arguments for public involvement in research. Some might argue that the public have a moral and ethical right to have a say regarding publicly funded research. Indeed, public involvement

may drive research along lines of enquiry that are more relevant and appropriate to public concerns. The James Lind Alliance is one initiative that enables the public to shape the health research agenda. Patients, carers and clinicians are teamed up to identify future research priorities for specific health areas that are important to all groups (often presented as 'top 10s'). These are then published and publicised to ensure researchers and funders alike understand the issues that matter most to patients.

It is also thought that, under the right circumstances, public involvement can improve the quality and impact of research. For example, public involvement can lead to more appropriate participant information and user-friendly data collection methods. Although the evidence base is still emerging, some studies have reported positive outcomes from public involvement, including enhanced recruitment rates.

SHAPES AND SIZES

Public involvement can take many forms, depending on the particular research area. Members of the public may, for example, be

CONTINUED ON PAGE 14...

...CONTINUED FROM PAGE 13

asked to join advisory panels or serve on steering committees, influencing strategic-level decisions about research topics and design.

Involvement can also be more ‘hands on’, with citizens working alongside researchers on particular projects to design or ‘co-produce’ elements of the research, such as protocols, participant recruitment materials or reports on findings. With the right training and support, some projects may allow opportunities for members of the public to take on roles as co-researchers or even lead the research themselves (see box on the left).

CASE STUDY: PATIENTS TURNED RESEARCHERS

An innovative study has seen patients turn researchers to tackle a James Lind Alliance prioritised research topic. A group of people with experience of diabetes approached researchers Debbie Smith and Alison Wearden at the University of Manchester to investigate the experiences of self-management for people living with well controlled type 1 diabetes. The researchers took on the challenge whilst adding a novel twist. Instead of collecting the data themselves, they trained five people with personal experience of diabetes to conduct qualitative interviews. Analysis and interpretation of the data were also conducted by the patients and the researchers in collaboration. These design choices, the researchers argue, added a new dimension to the findings: ‘The collaboration resulted in a great study, as we all had different levels of expertise, and sharing this as a research team was an exciting learning experience’. The results are currently being prepared for publication, co-authored by patients.

research papers to state how they involved patients in design, delivery and dissemination. Whilst much remains to be evaluated and explored, the potential rewards at stake are ready for the taking.

LAMIECE HASSAN

Public Involvement Research Officer, Health eResearch Centre,
The University of Manchester
Twitter: @LamieceHassan

For further information see:

INVOLVE www.invo.org.uk

James Lind Alliance www.jla.nihr.ac.uk

THE CONVERSATION: BECAUSE WE STILL NEED EXPERTS

WRITTEN BY HOLLY SQUIRE

Despite what former Education Secretary Michael Gove says, we need experts now more than ever before, particularly to help people understand difficult and complicated topics – just like the EU referendum.

In the current environment, scientists and academics are faced with a difficult choice. On the one hand, there is increasing pressure, and a genuine desire from many, to put their knowledge ‘out there’ and to engage with the media and a wider audience. On the other hand, there are fundamental tensions between political, media and scientific norms of communication, along with the fear of actually speaking to journalists in the first place.

This is where ‘The Conversation’ (www.theconversation.com) steps in, as an independent website providing news analysis, comment and opinion on current affairs and subjects of interest, written entirely by academics.

A NOVEL APPROACH TO COMMUNICATION

The Conversation provides a team of professional journalists, with whom you, the researchers, can work to bring your expertise to a wider non-academic audience in short, timely, informative articles. Uniquely, The Conversation’s collaborative online editing platform is set up so that authors must approve pieces before publication. The Conversation’s experienced journalists will help you to develop your communication skills, by editing your work to help it reach as wide an audience as possible, using your academic rigour and their journalistic flair. But you are the author and, if you don’t sign off the finished piece, it can’t be published.

For your efforts, you will gain greater media exposure and a wider audience for your research, as well as honing your communication skills and finding new opportunities to connect and work with academic collaborators.

The Conversation UK is a not-for-profit company and charitable trust funded by more than 60 member universities, Research Councils UK (RCUK), the Higher Education Funding Council for England and other funding bodies. Based in London, but with regional editors across the UK, our team of around 20 journalists works with experts from our member institutions to unlock knowledge and help improve the quality of public debate.

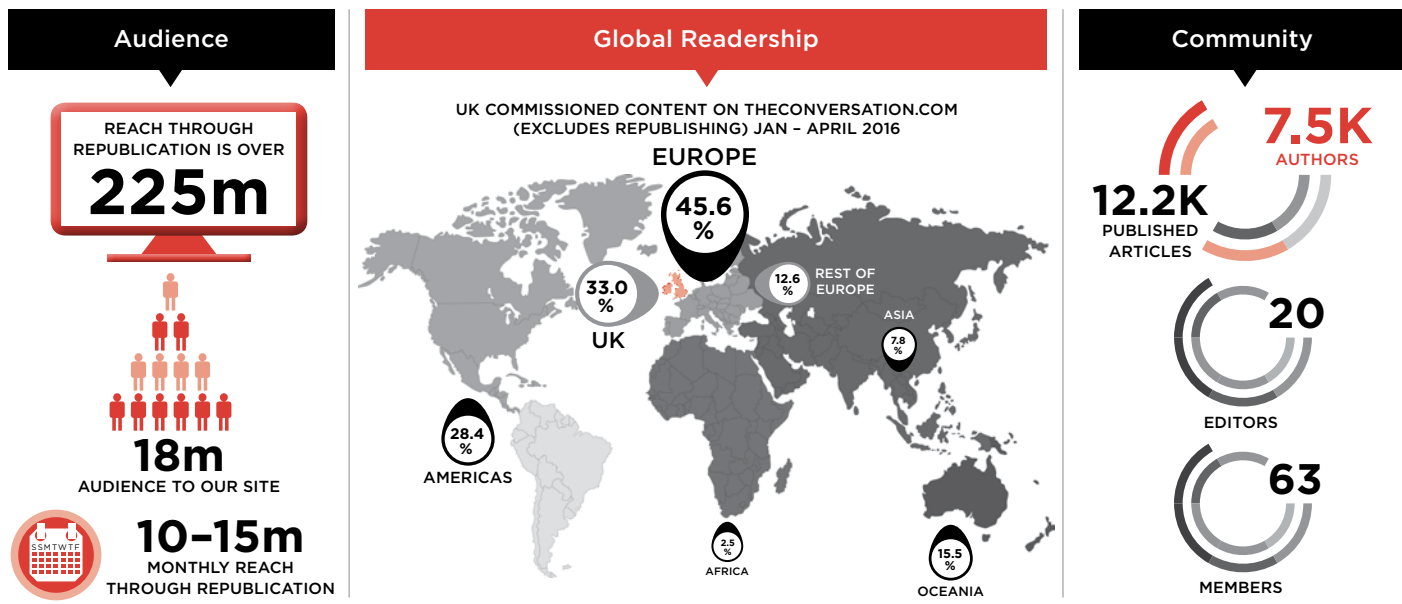
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HOW TO GET PUBLISHED

To write for The Conversation you must have a current academic affiliation: that is, a position at a (generally publicly funded) university or research institute, whether part time, full time, visiting, honorary or emeritus. We will also consider those at organisations designated as independent research organisations by RCUK. We are looking for articles on subjects written by experts in their field. We welcome researchers of any level, including PhD students writing on subjects closely aligned to their theses.

You can pitch your ideas directly to our team of editors through our website. You should tell us briefly what you want to write about, ideally including an explanation of why your story matters, and why it is currently

topical. Most articles in The Conversation are just 600–800 words, so it’s important to start with a clear idea of the most important point(s) you want to cover, which will help us provide a quick response to your pitch.

You can hone your pitch first by talking to someone else outside your field of expertise. What questions do they ask? If they were to ask ‘So what?’ how would you respond? That’s the first question readers will ask in deciding whether to spend time reading your article. If you can answer that question well, it’s much more likely your pitch will be accepted and that you will find a wide global audience for your work.

The Conversation typically receives dozens of pitches a week. Not all are suitable, so we can’t accept every pitch, but we still aim to reply within a couple of days to at least say it’s been received or to reject it. Even if we don’t accept your pitch, it’s good to connect so that we know you’re interested in writing and also your field of expertise, as there may be opportunities in the future.

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STEM CAREERS: INSPIRING THE NEXT GENERATION

WRITTEN BY MICHELLE GALLEY & ALICE FLETCHER

We all recognise the need to encourage students to consider careers in STEM (science, technology, engineering and maths). Here, activity provider Michelle Galley explains why it's important to expose youngsters to extra opportunities to learn about science, and Society member Alice Fletcher tells us what volunteers running these activities gain from getting involved.

THE STEM OUTREACH PROVIDER

STEM Sussex, the outreach department based at the University of Brighton, aims to inspire the next generation to pursue courses or careers in STEM by organising a host of engaging outreach activities, including festivals, schemes and competitions.

The motivation to do this comes not just from a passion for STEM subjects and a desire to show young people the diverse and impactful careers that are on offer, but also to address the STEM skills gap in the South East of England. Recent statistics show that STEM subjects have increased in popularity in the region, but are still lagging behind the national average in both uptake and achievement.

However, much is being done to address this, and it is an improving picture. In Sussex last year, 700 individuals with STEM backgrounds from well over 200 organisations helped enthuse over 45,000 students from across the South East.

STEM outreach, in all its forms, has an enormous impact on students. Alex Holmes, a STEM teacher at Millais School in Crawley, summarised the benefits of STEM outreach for his pupils as follows.

'We really value the opportunities we get to work with people from companies through workshops on projects and competitions ... The difference that it makes is at two levels. One is helping students to relate different subjects at school. They will often talk about "this isn't a science lesson" or "why do we have to learn about this in maths?" It helps students to understand that they are all related. It is also about opening up their minds to the career opportunities that are out there, which then gets them excited about learning these subjects at school.'

THE ENDOCRINOLOGIST VOLUNTEER

As a scientist, I feel I have an obligation to inspire and inform the next generation about STEM subjects and careers, so last year I became a STEM Ambassador.

Unfortunately, within schools, the age-old rumours of STEM subjects being 'difficult' and 'boring' seem to have persisted. By being a STEM Ambassador, I can begin to dispel some of these rumours, and share some of the real-life applications of these subjects beyond the classroom. As I enjoy what I do, I wanted to share my enthusiasm and passion to inspire young people in the STEM subjects and to demonstrate the exciting career options that these subjects provide. I also wanted to challenge some of the stereotypes associated with STEM careers to show that anyone can be a scientist (or have any other STEM career).

However, shortly after joining the STEM Ambassador scheme, I realised that it was not only an opportunity to inspire, but also a way of being inspired myself. Engaging in STEM activities allows me to take a step back from my PhD, and reminds me of the bigger picture of my research, so helping to provide a fresh perspective. In addition, through being a STEM



Employers supporting students at the Big Bang Fair South East 2016.
©STEM Sussex

Allowing children to take part in hands-on activities in a STEM club or at an event does inspire students. Students who are involved start to see the diverse career possibilities. People coming from industry have authenticity, specialist knowledge and can even challenge stereotypes about who can, for example, become a civil engineer or a research scientist.

As an experienced teacher, Alex has seen the results of STEM outreach. 'The things that work really well are companies that come into school to deliver events ... for the older students, it is really valuable if they can go and visit company sites ... they [employers] support us with information about careers, as there seems to be a gap regarding this in schools at the moment.'

MICHELLE GALLEY, STEM Sussex

To learn about how to get involved in STEM outreach, please visit www.stemsussex.co.uk.

Ambassador, I have needed to think outside of the box to communicate complex subject matter to young people in an exciting and engaging way. This has aided my communication and presentation skills, as well as my creative thinking.

Beyond the academic benefits of being a STEM Ambassador, most importantly, it's fun! You have the opportunity to attend STEM events around the country and meet lots of new people: young people and fellow STEM ambassadors alike. This has been particularly useful for me as a PhD student, as I have found out more about different career paths that fellow STEM Ambassadors have taken from similar starting points.

However, for me, the biggest benefit of being a STEM Ambassador has to be the sense of achievement obtained when you see the excitement and enthusiasm in faces of young people as you inspire them in a subject that you are passionate about.

ALICE FLETCHER, PhD Student, University of Birmingham

If you would like to become a STEM Ambassador, visit www.stemnet.org.uk/ambassadors.

RUNNING A SCIENCE STAND: A VOLUNTEER'S SURVIVAL GUIDE



WRITTEN BY OMAR JAMSHED

You've seen the email; your Society needs volunteers, people like you, to participate in hands-on activities teaching school children about the science behind hormones. Knowing you have the time and instilled by a sense of duty, you volunteer to help. But a few days before the event, you begin to think about what you'll say and do. You feel stressed – what if you aren't prepared? Don't despair, for your benefit we've put together our top tips on how to get through the day with success:

1. Think about why you have volunteered. Science communication is about instilling a sense of curiosity and wonder in your audience. You're giving up your time to encourage them to think and see the world in a different way – a worthy pursuit! Not to mention – you love your subject.

4. Ask your audience what they have done before visiting your stand. You might find an opportunity to link your activity to that. For example, asking what they had for lunch is a good way in to discuss blood glucose levels and make the topic seem really relevant to them.

7. Smile! It may be tiring to do this all day but being approachable is key to your audience wanting to come to you and learn something.

8. Don't be afraid to admit if you don't know the answer. This only proves you're human, and avoids spreading misinformation.

9. Probe how much your audience learned at the end of the activity by asking them follow-up questions.

10. Evaluate your performance. Science communication is a skill and you will get better the more you practice and learn from your experience. Watch your fellow volunteers; they might have a way of explaining something you've never considered before.

2. Read the briefing document you've been sent beforehand. Preparation is key.

3. Try to anticipate the questions you may be asked; children are naturally curious, but questions are likely to be simple and manageable.

5. Don't use technical language unless necessary – people may switch off if you talk about circadian rhythms instead of body clocks.

6. Tailor your message to your audience. Younger children may find learning about homeostasis too complicated while teenagers might find being told what glucose is patronising – asking questions is a good way to gauge their knowledge level.

11. Finally, and most importantly, enjoy it! Talking to the public about science is fun and can give you a new perspective on your work.

OMAR JAMSHED

Communications Executive,
Society for Endocrinology



HOW CAN WE WIDEN ACCESS TO MEDICINE?

WRITTEN BY KEVIN MURPHY



Currently, it might be more accurate to speak of social immobility rather than social mobility in the UK. The situation into which you are born, and its attendant advantages and disadvantages, have a tremendous influence on your progress through life, perhaps more so than 70 years ago. A recent report by the social mobility and educational charity, the Sutton Trust, has described how those at the top of many professions are predominately privately and Oxbridge educated.

While the press understandably prefers to dwell (in shirtless high definition close up) on which successful actors went to Eton, the professions found by this report to be disproportionately dominated by individuals from independent schools include medicine. Doctors are not representative of the public they serve, and students from poorer socio-economic backgrounds are significantly under-represented in medical schools.

Suggested reasons include more limited educational opportunities, and a lack of role models or support from family, school and peers. These factors might be relevant to many types of higher education applications, but some difficulties are specific to medicine.

SHORTCOMINGS OF THE SELECTION PROCESS

Many medical schools require a variety of non-academic skills or experiences which may not be equally available to all, for instance evidence of leadership and teamwork, and extracurricular interests. These are obviously not impossible to come by for even the most disadvantaged applicant, but students from more affluent backgrounds are likely to have more opportunity to amass such experiences.

Training a doctor takes time and money, so medical schools want to ensure that students they accept have a realistic view – that they won't drop out upon realising that they hate sick people, that white coats are unflattering, or that, say, the rewards of being a doctor are insufficient to compensate for the responsibility, the unsocial hours, the stress, and the Secretary of State for Health.

Relevant work experience is therefore critical, but can be difficult to access for students without family connections to the health service. When Trusts are stretched to deliver core services, equitable work experience provision is prioritised just ahead of providing gowns in a colour of the wearer's choice and adequately chilled champagne in outpatient departments.

ADDRESSING THE INEQUALITIES

So how should medical schools try to address these inequalities to 'widen participation', as it is described in current outreach parlance? Universities protest, with some justification, that they cannot be expected to undo the 18 or more years of disadvantage that some of their applicants will have faced. Most, however, make serious efforts to tackle the issue.

At Imperial College we have our 'Pathways to Medicine' scheme, co-funded by the Sutton Trust and supported by Health Education England and the Medical Schools Council. We have a strong record of providing admissions advice, visiting schools, running workshops and speaking at admissions events for the Royal Society of Medicine, the *Student BMJ* and at educational conferences. However, when we assessed our outreach activities several years ago, it seemed students needed sustained engagement, rather than one-off events and interventions, to increase their chances of winning a medical school place. We therefore designed 'Pathways to Medicine' as a cohesive programme of activities that school pupils engage with over 2½ years.

THE 'PATHWAYS TO MEDICINE' SCHEME

We enrol 60 pupils every year from under-performing schools in London. They start the programme midway through Year 11: late enough for their



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teachers to have some idea of whether they are likely to get the required grades at A-level, and early enough for us to provide guidance on A-level choice.

We set pupils up with current medical students as 'e-mentors', who can answer questions and concerns. During their Sixth Form years, the students visit the College for taster evenings, where they hear from practising doctors, perform biomedical experiments and interact with medical students. A recent event involved pupils learning about regulation of body weight, using a thermal imaging camera to look at energy expenditure and a body composition analyser to measure their percentage body fat.

We arrange work experience placements for all these students, and in Year 12 they come to the College for a week-long summer school. Here, amongst other things, they experience problem-based learning, get involved in surgical skills training and receive guidance on sitting UKCAT (UK Clinical Aptitude Test) and BMAT (Biomedical Admissions Test) entrance exams.

The programme works best when there are strong links between the school and the College. We rely on teachers to put suitable students forward, and we provide advice to them on writing references for applications to medicine.

Those on the scheme are always interested to find out about student life. We work closely with ICSM Vision, a widening participation society run by Imperial medical students, who do tremendous work supporting these activities, running medical conferences which the 'Pathways to Medicine' pupils also attend, and providing one-to-one interview training for each participant.

ASSESSING EFFECTIVENESS

So does it work? The first cohort have only just received their A-level results and, while many have received offers of medical school places, we still need to formally assess the programme's success later in the year, comparing participants with similar groups who have only been involved in one-off medical outreach events rather than a sustained programme. Our second and third cohorts are currently running, and we hope to recruit a fourth in 2017.

ONGOING ACTIVITIES

There is much discussion in the sector of how to most effectively widen participation in medicine. The Medical Schools Council's 'Selecting for Excellence' report¹ made several recommendations regarding socio-economic background. It also commissioned research identifying 'cold spots' in UK medical outreach activities, allowing medical schools to target their efforts to those regions with the greatest need.

The Inquiry into Access into Leading Professions by the All Party Parliamentary Group on Social Mobility held a recent session on medicine. This highlighted the importance of collaboration between schools and universities, of accessible work experience, transparency and accountability in admissions processes, and of contextualising admissions.

Medical schools must cope with the sometimes conflicting priorities of making medical education equally attainable to those from all backgrounds and ensuring that those we recruit will make good doctors. Because entry to medicine is so competitive, entry requirements are high, which can be a barrier to widening participation. Perhaps we should ask not 'How many A*s we can ask for?' but 'How many do you need to be a good doctor?'

Evidence shows that state school-educated applicants perform better at university than grade-matched privately educated applicants, suggesting that lowering entry requirements for applicants from particular



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'When we assessed our outreach activities several years ago, it seemed students needed sustained engagement, rather than one-off events, to increase their chances of winning a medical school place'

backgrounds will not necessarily lower standards. However, universities are encouraged to maintain high entry requirements by the importance of entry tariffs in the calculations that dictate institutional rankings. Nevertheless, many medical schools are now using such contextual data to support their widening participation programmes. The new UK Medical Education Database (UKMED) will allow us to track doctors through their undergraduate and postgraduate careers and should help guide such contextual analysis.

PUTTING MEDICINE WITHIN REACH

Beyond these initiatives, we must ensure that pupils from lower socio-economic backgrounds can conceive of medicine as a practical career. Many academically gifted pupils at schools I visit feel that medicine is not for them, but the preserve of some mistily imagined coterie of elite, naturally brilliant scholars. They imagine that doctors arrive fully formed, with all of the required skills and experiences.

We must persuade them that doctors are people like them, that we are looking for potential rather than finished products, and that the doctors of the future are right here, hidden within themselves.

KEVIN MURPHY

Admissions Tutor for Widening Participation in Medicine and Professor of Endocrinology and Metabolism, Imperial College London

REFERENCE

1. Medical Schools Council 2014 *Selecting for Excellence* <http://bit.ly/2bc0LRI>

A NEW KIND OF CHEMISTRY... WHERE ENDOCRINOLOGY MEETS ART

In a new venture, endocrinologists and film-makers have been working in partnership to explore the narratives and concepts that cinema uses to talk about romantic love. The aim is to appreciate how these relate to the way that science accounts for our understanding of what love is.

The project is entitled 'Queering Love, Queering Hormones', where 'queering' refers to reinterpretation of a piece of work with an eye to sexual orientation and/or gender. It is a collaboration between the British Film Institute (BFI), no.w.here (a not-for-profit artist-run organisation supporting contemporary film production) and King's College London, and is funded by the Wellcome Trust. The Society for Endocrinology helped to put the film-makers in touch with relevant endocrinologists.

Here, the different project participants discuss their roles and what they hope to gain from taking part.

THE REPRODUCTIVE ENDOCRINOLOGIST

Kim Jonas, St George's University of London

Public engagement takes many forms, and my recent foray into a world where science meets art was certainly different from my previous experiences of bringing science to school children. Via a 'match-maker' call from the Society for Endocrinology, I hosted a group of artists embarking on their own short-form films as part of this collaborative project.

My role was to 'talk endocrinology' with the artists, showing them how an endocrine laboratory operates. The aim was to dispel the myths surrounding laboratory practice: principally that we're not all measuring coloured liquids, but rather working with cellular and whole animal systems to unravel the complex pathways by which hormones exquisitely control our homeostasis.

The afternoon started with a laboratory tour. Viewing cells in culture and everyday laboratory tools was followed by a description of the ways in which we conduct endocrine-based research. We then progressed to lively debate and challenging questions regarding our perceptions of love, sexuality, desire and the roles that hormones play. This certainly provided food for thought about how our endocrine milieu may define our perceptions.

The film-based projects that the artists are working on are interesting and highly varied, and I for one can't wait to see the culmination of this 'endocrinology and art' collaboration on the big screen this autumn.



THE PROJECT MANAGER

James Halcomb, no.w.here

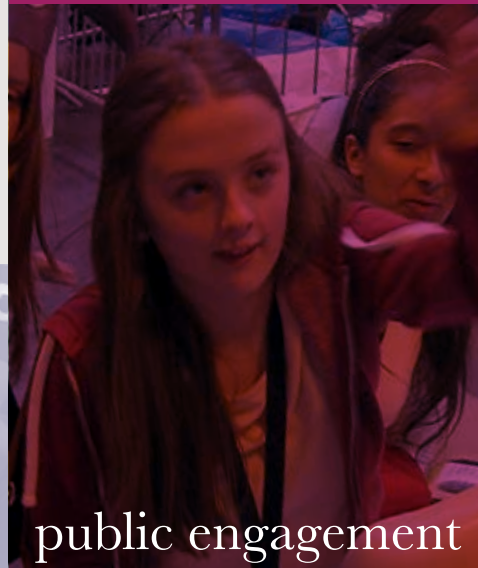
The project came about through discussions between no.w.here and the BFI, and was based on past collaborations which had linked the thematic of the BFI's public programme of films with opportunities for artists to make work in response, using the resources at no.w.here.

no.w.here is a space for artists run by cultural workers in Bethnal Green, which has a set of photochemical film resources at its heart.

This particular collaboration was based initially on an intuition in response to the BFI's 'Love' season in autumn 2015. We had a sense (from several Google searches on love/chemistry) that the discourse around public understanding of hormones, sexuality and desire was being framed very narrowly by some sections of the media, with endless articles in Sunday supplements obsessed with the suppression or encouragement of white, female, heterosexual desire via hormone supplements. Such articles inevitably then linked the consumption of such supplements with staying or aggravating the ageing process, and whether or not they might cause other, unknown ailments.

The project developed through dialogue with scientists and researchers at King's College London, who confirmed that there was a lack of public understanding around the function of the endocrine system. It appeared that an artistic exploration of the issues not currently addressed or articulated by scientific research would be fertile territory in which work could be made.

Having secured funding from the Wellcome Trust, no.w.here and BFI devised an open call for applications in response to the themes of sexuality, desire, politics, hormones and works which might deploy a queer sensibility to explore ideas about love, romance and desire.



public engagement

GRANTS

Available to Society members and public engagement professionals to create projects to engage non-scientists with hormones.

- Up to **£1,000** available
- For developing events, resources or other initiatives that aim to inspire school children, teachers, the general public or others about endocrinology and its impact
- Applications will be reviewed on **31 March** and **30 September**

@Soc_Endo

See www.endocrinology.org/grants for further details including eligibility criteria.

THE FILM-MAKERS

'Love/Sick' by Val Phoenix

For my project, I turned to my own condition, of living with a strain of breast cancer that is oestrogen receptor-positive. One of my treatment recommendations was to undergo hormone therapy to switch off the oestrogen that would feed the cancer. The hormone that had always appeared as the most 'female' one was now presented as something else: an enemy to my breast and, by extension, to my body.

As I started to work on my film, the cancer returned and I underwent a mastectomy. Consequently, my project became more introspective, as I surveyed my daily life of decocting herbs, performing physiotherapy and practising tai chi to quell my anxiety. I focused on the juxtaposition of bodily precarity and emotional power, playing with expectations of normalcy and embracing imperfections. I allowed myself to follow my instincts and explore working with what I have, in my own time, and to experience the discomfiture that brings.

'Love' by Renee Vaughan Sutherland

I was interested in exploring the projected notion of 'love' and 'falling in love' in mainstream cinema (Hollywood). Through research and discussion with an endocrinologist, I began to consider hormonal reactions that differ from or rebel against what was 'expected' on watching these narratives play out on the big screen.

For my film titled 'Love,' I recreated scenes from the movies 'Cinderella', 'The Prince and the Showgirl' and 'Pretty Woman', but inverted the roles' gender, sexuality, age, race and class with a diverse range of non-actors. Currently, in post-production, the film will combine footage from the actual movies and the recreated shot scenes using a fracturing and repetitive form of editing. The final stage of the work will be soaking the edited celluloid film with hormones. I'm curious if their physical presence on the film will influence how the audience reacts hormonally on viewing it.



YOU AND YOUR HORMONES: DRIVING CYBER TRAFFIC TOWARDS THE FACTS



WRITTEN BY ANNA MITCHELL

Teachers

Featured resource....

Testing blood sugar
Ages 8+ Students can test the glucose level of various 'blood' samples and determine whether or not the person has eaten. They will then correct the blood sugar level by treating with different regulatory 'hormones'.

Search resources

By type:

- Teaching slides
- Practical experiments
- Games and quizzes

By topic:

- Growth and puberty
- Reproduction
- Eating, sleeping and homeostasis
- Energy balance and obesity

Education events...

World Congress of Insulin Resistance, Diabetes & Cardiovascular Disease
19-21 November 2015, Los Angeles, USA

Eat Sleep Wake Repeat at the Big Bang Fair
10.00 - 15.00 30 June 2015, Crawley, UK

I'm a Scientist, Get Me Out of Here! Hormones Zone
15-26 June 2015

National training scheme for benign thyroid disease
9 June 2015, Birmingham, UK

Useful links...

- Royal Society of Biology
- Understanding Life
- The Wellcome Trust
- Association of Science Educators

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If you search Google for the word 'hormone', it currently returns over 92 million hits. This astonishing fact goes to show that the internet is absolutely full of information about hormones and endocrine conditions. Some of this information is high quality and reliable, and some of it is not.

The Society for Endocrinology's 'You and Your Hormones' website (www.yourhormones.info) began its ambitious development in 2009, under the direction of the Society's Public Engagement Committee. The aim of this project was to produce an accurate, comprehensive online resource for hormone information, which could act as a focus for the rest of the Society's public engagement activities.

To get the website up and running, a vast amount of work was needed to develop content. In total, over 140 endocrinologists were involved in writing, editing and checking around 150 articles. Since its launch in 2011, the website has attracted a huge volume of traffic – over 25,000 users were accessing the site each month in 2015. Most visitors arrive at the site via search engines, giving You and Your Hormones a high search engine ranking, which in turn attracts more visitors. Anecdotal feedback from users regarding site content has been exceptionally positive.

CHANGING NEEDS

When the website was developed, most people were accessing the internet from desktop or laptop computers. In 2015, an Ofcom survey showed that two-thirds of people in the UK owned smartphones, and this number continues to rise. Nearly 60% of users are now accessing the website using smartphones and tablets but are not getting a mobile-optimised view, highlighting the need for You and Your Hormones to evolve.

The Public Engagement Committee felt that, in addition to offering a 'mobile-friendly' site, the look and feel of the website generally needed updating, the navigation tools could be more user-friendly, and the site needed to expand to include resources designed specifically for students and teachers.

To guide this well-deserved revamp, a working party was formed, made up of a few enthusiastic (and IT savvy) Public Engagement Committee members. This group discussed development of new content, ways of improving site navigation, and the need to be distinct from, and yet related to, the Society's brand, to reassure users that the content was from a trusted source. As a result, a fresh logo and website design have been commissioned, and new educational resources are currently being developed to engage teachers and students. The site will be rebuilt from autumn 2016 onwards, and will hopefully be re-launched in the new year.

EXTENDING THE SITE'S REACH

The renewed site will be visually appealing and easy to navigate, allowing users to quickly access the huge amounts of valuable expert information available. We encourage Society members to use the site and to refer people to it. These could include

You and your Hormones

About | News | Teachers | Students | Patients | Browse content

Click to find out more...

What are hormones?
Hormones are chemicals that are made by specialist cells and released into the bloodstream to send a message to another part of the body.

Topics...

- Growth and puberty
- Reproduction
- Eating, sleeping and homeostasis
- Energy balance and obesity
- Glossary

Come to an event...

World Congress of Insulin Resistance, Diabetes & Cardiovascular Disease
19-21 November 2015, Los Angeles, USA

Eat Sleep Wake Repeat at the Big Bang Fair
10.00 - 15.00 30 June 2015, Crawley, UK

I'm a Scientist, Get Me Out of Here! Hormones Zone
15-26 June 2015

National training scheme for benign thyroid disease
9 June 2015, Birmingham, UK

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patients wanting basic information about their endocrine condition, members of the public interested in hormones, clinical and basic science researchers doing endocrine-related projects, school children learning about hormones in biology lessons and teachers looking for resources for their students. We hope that Society members will help us to achieve our aim of making You and Your Hormones the first port of call for anyone looking for authoritative information about all things endocrine.

If you have teaching resources or activities that you think could be included on You and Your Hormones, please contact joanne.stubbs@endocrinology.org.

ANNA MITCHELL
Academic Clinical Fellow, Newcastle University
Twitter: @Anna_L_Mitchell



NEW DEVELOPMENTS: CRG AND THE ENDOCRINOLOGY DASHBOARD

FROM OUR CLINICAL COMMITTEE CORRESPONDENT



As many readers will know, the specialised services commissioned by NHS England have been grouped into six National Programmes of Care (NPoC); endocrinology lies within the NPoC for internal medicine.

Each NPoC has several Clinical Reference Groups (CRGs) to provide clinical advice and leadership. These groups of clinicians, commissioners, public health experts, patients and carers use their specific knowledge and expertise to advise NHS England on the best ways that specialised services should be provided.

In April this year, NHS England published the outcome of a 30-day engagement period with stakeholders on proposed changes to CRGs and their membership. Further information on the changes to CRGs can be found in the engagement outcome report.¹

THE SITUATION FOR ENDOCRINOLOGY

We are delighted that, with our work ongoing, NHS England saw fit to continue our Specialised Endocrinology CRG in its recent review. We see this group as important for the further development and identity of endocrinology as a specialty.

Our CRG works alongside many other clinical specialty groups that advise on specialised commissioning and quality assurance, and thus developments in our field are often somewhat slower than we would wish. That said, we have recently been very successful as a CRG in the NHS England Annual Prioritisation process that determines investments and changes in commissioning for specialised services in the future. A number of endocrine drug policies have made it through this stringent process, which will in future allow greater transparency and more objective access to some of our less frequently used and more expensive drugs.²

REVISED CRG FORMAT

The Specialised Endocrinology CRG will reform again soon in a revised format. With growing recognition of the importance of contributions by senior clinicians to the CRG, the Chair will, in future, be remunerated for one session per week. There will be representatives from around the country, as well as representatives from learned societies, such as the Society for Endocrinology.

Members of the Specialised Endocrinology CRG can be seen on the NHS England website.³ I am currently Chair and Neil Gittoes (Birmingham) is the Deputy Chair.

ENDOCRINOLOGY DASHBOARD

We also wanted to update you on the specialised endocrinology dashboard. This will attempt to quality assure endocrinology services and will help endocrine units develop clinically meaningful standards of care throughout the country. There will be several criteria on the dashboard that will be recorded locally by Trusts and fed through to NHS England. We have

developed these with Petros Perros (Newcastle upon Tyne) and based many variables on the peer review hospital visiting system for endocrine departments that the Society for Endocrinology developed and which has been in place for some years. Thus, in the 'new world', our Trust managers are likely to ask for data regarding our endocrine activity.

The criteria which will be monitored by NHS England as a result of this as a 'specialised endocrinology dashboard', include the following:

1. Time to appointment from referral to specialist endocrinology.
2. Time to sending GP letters from outpatients from outpatient appointment time.
3. Time to sending inpatient summary to GP from inpatient episode.
4. Lab turnaround times – proportion of samples within 14 days for aldosterone, plasma and urinary catecholamines.
5. Time to measurement of prolactin and cortisol – proportion of samples assayed within 3 hours.
6. Time to diagnostic endocrine tests – insulin tolerance test.
7. Time to dynamic tests – glucose tolerance test.
8. Time to pituitary surgery from multidisciplinary team (MDT) meeting:
 - a) Cushing's and urgent surgery – visual pathway problems and pituitary bleeding.
 - b) Time to routine pituitary surgery from MDT decision.
9. Length of stay for adrenal surgery.
10. Length of stay for non-functioning pituitary adenoma operations.
11. Length of stay for Cushing's disease surgery.
12. Patient survey within the last 2 years.
13. Presence of transition clinics.
14. Time to genetic counselling when necessary.

This is obviously only a selection. We have tried to come up with a list of sensible things that are reflective of best endocrine practice. Hopefully, it will not be too difficult to obtain the data.

'The specialised endocrinology dashboard will attempt to quality assure endocrinology services and will help endocrine units develop clinically meaningful standards of care throughout the country'

It will be important for endocrine teams to work effectively with their local contracting teams to help ensure that this is delivered in the manner intended.

If you have any queries or suggestions for further developments, please let the Specialised Endocrinology CRG know.

JOHN WASS

Professor of Endocrinology, University of Oxford
Chair, Specialised Endocrinology Clinical Reference Group

REFERENCES

1. NHS England 2016 *Revisions to Clinical Reference Groups in Specialised Commissioning: Engagement Period Outcome Report* <http://bit.ly/2bc5hQd>.
2. NHS England 2016 *NHS England announces provisional investment decisions for specialised services* <http://bit.ly/2aYk10A>.
3. NHS England 2016 *Clinical Reference Group on Specialised Endocrinology* <http://bit.ly/2b5eQBl>.

SHOULD YOU TWEET?

FROM OUR SCIENCE COMMITTEE CORRESPONDENT



The Medical Research Council (MRC) recently asked me to speak at their annual gathering of senior fellows about the use of social media to promote their research and to engage the public.

While what I said was, by and large, well received, I did face significant resistance – ‘*What a waste of time!*’ – ‘*We should be focusing on our research!*’

Social media, while not for everyone, can be incredibly effective IF used appropriately.

For instance, I have a Facebook account that I use for posting pictures of family vacations or which wine I might be enjoying of an evening. However, trying to push out a scientific message between images of sandy beaches and glasses of Merlot is, I would suggest, not particularly effective.

Rather, my preferred professional social media platform is Twitter. I tweet ONLY ‘in character’ as an obesity geneticist, but include broader issues that influence me as a scientist, such as ‘Brexit’. I don’t tweet anything personal. This is absolutely crucial, because you are not Stephen Fry or Taylor Swift. You want followers who know your ‘brand’ and are interested in your science.

The problem of course, is that you need followers. So how to begin?

All the major journals, funding bodies and learned societies have Twitter accounts. My strategy was to start by ‘following’ as many that made sense to my ‘brand’ (e.g. *Nature Genetics*, MRC, Society for Endocrinology etc.). These organisations tweet on a very regular basis to publicise events, publications and funding calls. I ‘retweeted’ as many of these as appropriate. These organisations need relevant followers who will be receptive to their tweets so, after a time (and furious retweeting), they will follow you back.

By this time in your tweeting career, you may have a following comprising a few friends, colleagues and family members. The difference in being followed by an organisation like the MRC, however, is that they have more than 27,800 followers. So if you tweet about your new publication to your meagre 78 followers, but it gets retweeted by the MRC or a similarly sized organisation, your tweet to 78 people gets broadcast, in an instant, to an audience of tens of thousands. Some of those MRC followers may well follow you back! And so on and so forth.

You do have to invest a little time to build a relevant group of followers. But if you, like me, use Twitter on your phone, then you can tweet anytime and anywhere, and tap into the true power of Twitter – its incredible ability to amplify a message. Just always be mindful of your ‘brand’.

GILES YEO

Science Committee correspondent

Twitter: @GilesYeo

To get in touch with the Society’s Committees, email members@endocrinology.org

REPRODUCTIVE ENDOCRINOLOGY & BIOLOGY ENDOCRINE NETWORK: AN UPDATE

WRITTEN BY STEVE FRANKS AND ANDREW CHILDS

The main objective of the Endocrine Network in Reproductive Endocrinology & Biology (ENREB) has been to establish a broad-based group in reproductive endocrinology as a platform for scientific meetings, collaborative research and teaching. It is intended to be one that will appeal to basic and clinical scientists in the field, as well as clinical endocrinologists.



To date, nearly 200 members of the Society for Endocrinology, including clinical endocrinologists and clinical and basic scientists, have signed up to ENREB. The specific aims of the Network include:

- input to the Programme Committee of the Society for Endocrinology BES conference regarding plenary lectures and symposia
- close collaboration with the Society for Reproduction and Fertility, encouraging collaborative research in reproductive endocrinology
- provision of a forum for teaching and training in reproductive endocrinology.

SUCCESSFUL EVENTS

The activities of ENREB were launched in 2014 by bidding for, and hosting, the successful European Society of Endocrinology Basic Endocrinology Course, focusing on reproductive biology. Since then we have proposed symposia at successive Society for Endocrinology BES conferences, which have been included in the programme.

ENREB has continued to organise meetings of ReproSouth, which have proved popular as a forum for presentation of work in progress by PhD and MSc students and postdocs. We are currently planning to organise a 1-day, interdisciplinary meeting on the transforming growth factor- β (TGF β) family in reproductive biology. We are also considering a plan to arrange a meeting on clinical aspects of reproductive endocrinology as either a stand-alone symposium or as a satellite meeting of the Society for Endocrinology BES conference.

ENHANCING COMMUNICATION

In addition to this, the Society circulates Network-specific newsfeeds to ENREB members detailing developments in research, funding, and clinical practice that are relevant to those working in the field of reproductive endocrinology and biology.

The first formal meeting of Network members was held at the Society for Endocrinology BES conference in 2015, and we hope to arrange another such meeting to discuss the future direction and activities of ENREB at this year’s event. There is still much to be done with respect to co-ordinating multi-centre research efforts, but there have already been suggestions from members of ENREB and the Society about research topics which might benefit from the Network’s support.

We look forward to developments in this area and we would very much welcome input from members about collaborative research as well as in supporting scientific meetings, teaching and training.

STEVE FRANKS & ANDREW CHILDS
Network Leads

Find out more at www.endocrinology.org/endocrinenetworks or contact debbie.willis@endocrinology.org.

We welcome input from members about collaborative research as well as in supporting scientific meetings, teaching and training’

TOP BASIC SCIENCE JOURNAL IN ENDOCRINOLOGY



All the Society for Endocrinology's journals have received their updated impact factors, which take into account citations in 2015 of papers published in 2013 and 2014.

The newly released impact factor of 4.498 for *Journal of Endocrinology* has seen this Society journal climb an impressive 17 places in the Endocrinology and Metabolism category. With an impact factor now higher than those of the Endocrine Society's journals *Endocrinology* and *Molecular Endocrinology*, as well as that

of *Molecular and Cellular Endocrinology*, it is now the top basic science journal dedicated to endocrinology.

Journal of Molecular Endocrinology's strong impact factor of 2.947 confirms that it retains its position as a premier journal in molecular endocrinology. The journal's underlying 5-year impact factor, which provides a longer term measure of quality, is 3.258.

Endocrine-Related Cancer received an impressive 2015 impact factor of 4.472, and remains in the top quartile of both its categories: Oncology, and Endocrinology and Metabolism. This reinforces its standing as the leading journal linking oncology and endocrinology, with a 5-year impact factor at 4.845.

Clinical Endocrinology has risen four places in the Endocrinology and Metabolism category, with a new impact factor of 3.487.

We thank the Editorial Board members, and in particular the Editors-in-Chief, for their commitment to the Society's journals. Equally important are the authors and reviewers who have supported the journals and contributed to their success.

RAISED PROFILE FOR ENDOCRINE CONNECTIONS

The Society's open-access journal *Endocrine Connections* has been accepted for indexing in Thomson Reuters' Science Citation Index Expanded (SCIE). This will provide further exposure for all articles, greatly enhancing the ability of readers to discover the authors' work. Authors can also track citation data for their articles, which will contribute to their H-indexes.

Professor Josef Köhrle, the journal's Editor-in-Chief, expressed his delight, remarking, 'I hope that this news encourages more scientists and clinicians to submit their work to *Endocrine Connections* and benefit from the journal's fast publication times and open access publishing.'

Endocrine Connections is the only open access journal in endocrinology that is owned by learned societies, so submitting your paper directly benefits the field by supporting the Society for Endocrinology. The journal also offers an average receipt to acceptance time of just 46 days. For more information about publishing in *Endocrine Connections*, and the discounted charges for Society members, visit www.endocrineconnections.com.

Introducing THE BIOSCIENTIFICA TRUST



The Bioscientifica Trust is an independent organisation, recently set up to support networking and collaborative research among early career scientists and clinicians.

Each year, the Trust will make a number of small grants available. It welcomes proposals of benefit to endocrine research, or delivery of service, which are led by early career applicants, and which can demonstrate academic, clinical or public benefit.

The Society for Endocrinology's trading subsidiary, Bioscientifica Ltd, is providing initial funding for the Trust – a decision wholly supported by its major clients. Bioscientifica Ltd provides collaborative publishing, events and association management services to the biomedical and bioscience communities. All its profits are distributed back to these communities to advance science and medicine.

Governed independently, the Bioscientifica Trust will be overseen by a board of trustees. The initial trustees include representatives from the European Society of Endocrinology, European Society for Paediatric Endocrinology and Society for Endocrinology.

Chair of the Board of Trustees for the Bioscientifica Trust, Professor David Ray, commented, 'We are delighted to be holding the first funding

round for the new Bioscientifica Trust and to be providing the opportunity for early career scientists and clinicians to benefit from our grants. We have kept the application process as short and simple as possible, and we hope to see many applications from members of the Society for Endocrinology.'

Applications for the Trust's first round of grants opened on **1 September 2016** and will close on **1 November 2016**. For further information and conditions see www.bioscientificatrust.org.

IAN RUSSELL

Chief Executive, Society for Endocrinology and Managing Director, Bioscientifica Ltd

To find out more, visit www.bioscientificatrust.org.

Life's a beach: BETTER HEAD TO BRIGHTON



WITH OUR ANNUAL CONFERENCE FAST APPROACHING, AND THE JAM-PACKED PROGRAMME OF OVER 60 HOURS OF SCIENTIFIC AND CLINICAL SESSIONS NOW RELEASED, WE TAKE A LOOK AT A FEW OF THE THINGS YOU CAN EXPECT TO DISCOVER IN BRIGHTON THIS YEAR...



FUTURES

Following its launch in 2015, the popular 'Futures' series will return this year with a host of new sessions, all set to spark your career aspirations and help you scale those career hurdles.

Futures 1: MY FUTURE CAREER IN ENDOCRINOLOGY?

12.15–13.00, Monday 7 November

- 1.1 What has endocrinology done for me?
- 1.2 Endocrine careers: a trainee's view
- 1.3 Why, where and when to do endocrinology research. *Speaker: Society President Stephen O'Rahilly*

Futures 2: MAPPING YOUR ROUTE THROUGH THE RESEARCH FUNDING MAZE

12.00–12.45, Tuesday 8 November

- 2.1 Starter grants and building your pilot data
- 2.2 A view from the funding body: avoiding pitfalls in grant applications
- 2.3 Maximising your chances in fellowship applications; writing and interviewing

JOIN THE DEBATE!

This house believes that prednisolone should be the first line for glucocorticoid replacement in adrenal insufficiency

18.30–19.15, Monday 7 November

Chair: Jeremy Tomlinson (Oxford)

Speaking FOR: Karim Meeran (London)

Speaking AGAINST: Stafford Lightman (Bristol)

SOCIETY FOR ENDOCRINOLOGY AGM 2016

Don't miss your Society's Annual General Meeting! Find out more about the Society's highlights of the past year and plans for the future.

18.15–19.00, Tuesday 8 November

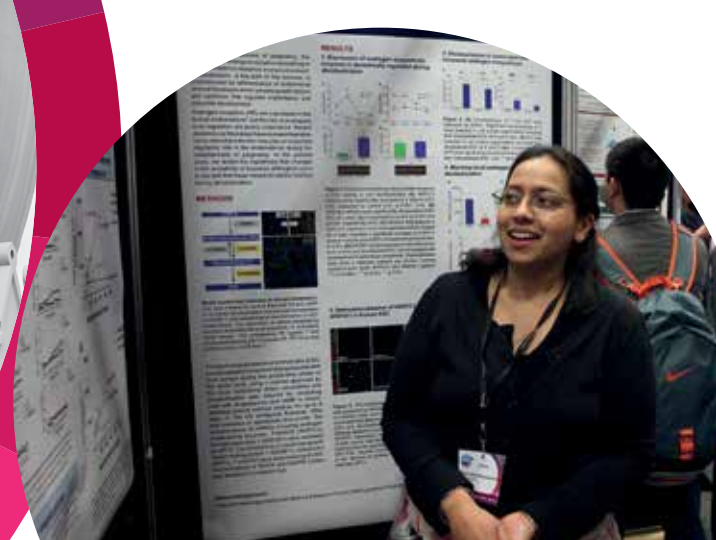
GET THE
LATEST
INFORMATION!

[www.endocrinology.org/
meetings/2016/sfebes2016](http://www.endocrinology.org/meetings/2016/sfebes2016)

NURSES
AT SfE BES
2016...

Take a look
at page 33
for details

#SFEBS16



'Time then to throw off your autumnal shackles and book your ticket to the seaside for a blast of endocrine enlivenment in a town bursting with colour and life!'

THE 2016 SOCIETY FOR ENDOCRINOLOGY BES CONFERENCE IS JUST AROUND THE CORNER. HERE, PROGRAMME SECRETARY SIMON PEARCE PROVIDES AN INTRODUCTION TO THE CONFERENCE AND THREE ATTENDEES TELL US WHAT THEY ARE LOOKING FORWARD TO MOST.



VIEW FROM THE PROGRAMME SECRETARY SIMON PEARCE

I'm very much looking forward to Brighton and the SfE BES 2016 programme. As I write, we have more than 140 speakers confirmed, including around 30 from overseas. They balance cutting edge advances in endocrine science with state of the art Continuing Professional Development updates for clinicians.

To highlight the many excellent clinical case reports in the meeting, we have introduced a prize for the top-scoring abstracts in this section. For the first time, and aiming to reduce lunchtime congestion at the poster displays, we will also have an electronic poster system for the remainder of the case report abstracts, allowing them to be accessible conveniently throughout the meeting.

This year, we are also pleased to run the conference back-to-back with the autumn meeting of the Association of British Clinical Diabetologists. Obesity, its pathogenesis and complications is an area of increasing overlap between our groups, and we are confident that a lot of content in each meeting will be of mutual interest.

On the basic science front, we have an excellent array of local and international plenary medallists, as well as a comparative endocrinology workshop and an expert view on endocrine disruptors.

Our focus has been to provide something for everyone: I hope to see you all in November!

A SCIENTIFIC PERSPECTIVE TONY COLL

Like Graham Greene's allegorical candy, which reads the same, however far down you bite, it is easy to consider the nature of things as unchanging. The humdrum of working life can leaden thinking into nothing – new doldrums. Time then to throw off your autumnal shackles and book your ticket to the seaside for a blast of endocrine enlivenment in a town bursting with colour and life!

If you've given up thinking about glucocorticoid therapies, sessions on how to uncouple the anti-inflammatory benefits from the metabolic harm could be just the tonic.

If you really *do* blame your parents for everything that has gone awry in your life, a symposium on early life programming of disease risk will prove invaluable in helping you understand the mechanisms and deal with the consequences.

For the frustrated scientist who finds themselves wondering why all their grant money has gone on running a bed and breakfast for mice, an Applied Physiology Workshop aims to shine a light on using other model systems to unravel the complexities of endocrine physiology.

Suitably enriched, consolidate your revival with a few games of air hockey and 'Whac-a-Mole' on the pier, before raising a glass or two in a watering hole of your choosing (I believe there is more than one).



CLINICAL CONSIDERATIONS AMIR SAM



My dilemma about which session to attend starts on the first morning, when a symposium on the challenges in pituitary disease partly clashes with a session on the late effects of cancer treatment. Other sessions which have caught my eye include the symposium on genetic understanding of endocrine disease and the debate on glucocorticoid replacement in adrenal insufficiency.

Professor Sir Steve Bloom's Jubilee Medal Lecture 'Gut and money, customer shrunk' will be a fun and thought-provoking start to the second day. I am also looking forward to hearing about some commonly encountered grey areas in the workshop 'Endocrinology at the edge of the reference range'.

The 'How do I?' workshops on Tuesday and Wednesday will cover a wide range of clinically useful topics and are not to be missed. My last day is set to be rather thyroid-heavy, beginning with the 'Clinical thyroidology update' and ending in 'A year in thyroid'!

EARLY CAREER OUTLOOK ANNA MITCHELL

This year's programme looks fantastic and offers something for everyone. Clinical Management Workshops always teach me something new to take back to my own practice. I also pick up pearls of wisdom at Meet the Expert sessions, so I'll try to get to as many of those as I can.

For inspiration for future research projects, I'll definitely attend some symposia (particularly on genetics!) and all the plenary lectures. It's a struggle to get up in time for the early morning sessions, but it's worth it for the ensuing 'research envy'.

Many sessions this year particularly cater for early career members. For clinical trainees, the SCE exam 'skills' session is included for the first time, and shouldn't be missed if the exam is on your horizon. All early career members will find plenty of useful, both at the Futures session on 'My future career in endocrinology', and at the Early Career Symposium 'Launching your career in endocrinology – whatever it may be'.



Finally, we can look forward to the Early Career Quiz and Dinner. I'm pretty rubbish at the obscure quiz questions, but I always find myself next to someone nice (and clever!) who doesn't care that I'm not contributing much to the team score!

CORPORATE SUPPORTERS

The Society for Endocrinology operates a Corporate Supporters' scheme to strengthen our relationship with industry and further our charitable objectives.

We are delighted to highlight the activities of some of our Corporate Supporters here. We thank them for their support and contribution to scientific and clinical endocrinology. Corporate Support is vital to the Society for Endocrinology, enabling us to further our charitable objectives and engage with endocrinologists, supporting their learning and advancing the science of endocrinology.

For further information, visit www.endocrinology.org/corporate or contact amanda.helm@endocrinology.org.

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Pfizer is one of the world's premier innovative biopharmaceutical companies, discovering, developing and providing over 100 different medicines, vaccines and consumer healthcare products that help save and transform the lives of millions of people in the UK and around the world every year.

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The Society for Endocrinology has agreed a new 2-year partnership with Pfizer. The agreement is first of its kind for the Society, and aims to deliver maximum benefit to both organisations and the broader aim of advancing endocrinology.

Paul Carroll, Chair of the Society for Endocrinology Corporate Liaison Board, says

"The partnership recognises the Society for Endocrinology's commitment to working with industry to achieve its objectives. It represents a true collaboration with an industry partner, working on joint projects for the benefit of endocrinology."

James Steed, UK Lead for Endocrine Care at Pfizer, comments

"The NHS is changing in response to various pressures, and the needs of our partners and the people they care for reflect this. We believe that, through working in partnership, combining our skills, experience and resources, together we can tackle some of the greatest challenges facing the NHS today. The new partnership will strengthen Pfizer's relationship with the Society, and ultimately improve patient care."

To find out more about what Pfizer are doing to support the NHS and patients in the UK, please contact James Steed on +44 (0)1304 616161.

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ENGAGING STUDENTS WITH ENDOCRINOLOGY: UNDERGRADUATE ACHIEVEMENT AWARDS

WRITTEN BY NIAMH MARTIN



The Society for Endocrinology Undergraduate Achievement Awards aim to encourage excellence in the study of endocrinology by undergraduate students. Here, Niamh Martin from Imperial College London (whose department received an award last year) tells us how she used it to promote interest and learning in endocrinology.

I lead the endocrinology courses in years 1 and 2 at Imperial College Medical School in London. We have approximately 350 students per year. Year 1 focuses largely on the pathophysiology of endocrine disease, while there is greater emphasis in year 2 on clinical aspects of endocrinology.

The courses are very popular, reflecting enthusiastic teachers and the opportunity for students to consolidate their learning from lectures with aligned clinical cases discussed in small group tutorials. However, like any teacher, I am always looking for new ways to engage my students. This is particularly challenging for large student cohorts, a challenge shared by many UK medical schools.

EMPLOYING THE SOCIETY'S HELP

With this challenge in mind, I successfully applied for a Society for Endocrinology Undergraduate Achievement Award in 2015. I proposed awarding £150 each to the highest performing undergraduate students in year 1 and year 2 endocrinology, following an interactive formative assessment at the end of each academic year.

An example of the scratchcards used for the iRAT test.

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)					
Name	Group 18		Test #		
Subject	Endo		Total	31	
SCRATCH OFF COVERING TO EXPOSE ANSWER					
	A	B	C	D	Score
1.			☆		4
2.		☆			4
3.			☆		4
4.		☆			4
5.			☆		4
6.	☆				1
7.				☆	4
8.	☆				2
9.				☆	4
10.		☆			4

Team-based learning (TBL) is a structured form of small group teaching which promotes application of knowledge and problem solving. I developed a TBL approach to formative assessment for year 1 and year 2 endocrinology.

TEAM-BASED LEARNING IN ACTION

The students first sat an iPad-based individual quiz, examining all aspects of the course, under exam conditions (individual readiness assurance test or iRAT). This comprised some single best answer questions (SBAs) and also some very short answer questions (VSAs). SBAs are widely used in undergraduate medical assessments across the UK. Nevertheless, a criticism of SBAs is that the student is 'prompted' to select the best answer from a list of options, whereas VSAs may be more challenging, since the student has to give a short answer without any such prompts.

'I am always looking for new ways to engage my students. This is particularly challenging for large student cohorts, a challenge shared by many UK medical schools'

Following the iRAT, students were placed into teams and worked through the same assessment again, this time using a scratch card in a 'pub quiz' style. To add to the competitiveness, negative marks were applied to the score whenever more than one attempt was made to scratch off the correct answer.

It was fascinating to watch the different team dynamics at play during the session. Some teams were cautious, whereas others were more 'gung ho'. In every case, there was huge discussion about the correct answer, which was of enormous educational benefit to all.

To complete the learning experience, the teams then went through the answers, focusing on the questions that the students found most challenging. The top 20 students for each year were then selected for a viva, with the highest performer awarded the Society for Endocrinology Undergraduate Achievement Award.

INSPIRING FUTURE ENDOCRINOLOGISTS

There has been great student feedback from this initiative. Several students have expressed a wish to learn more about endocrinology in their BSc year or have applied to our department for summer studentships.

From an educator's perspective, I hope that this initiative has helped to inspire undergraduates to consider endocrinology as a specialty that they would like to learn more about in future years.

NIAMH MARTIN

Clinical Senior Lecturer, Imperial College London
Honorary Consultant in Diabetes and Endocrinology, Imperial College Healthcare NHS Trust

You can find out more at www.endocrinology.org/grants/prize_undergraduateachievement.html.

Catch up on the latest news and views in the Society for Endocrinology blog
THE ENDOCRINE POST: www.endocrinologyblog.org

MODERNISING THE WORKFORCE SURVEY

WRITTEN BY STELLA GEORGE



Commissioned as a joint venture between the Association of British Clinical Diabetologists (ABCD), Diabetes UK, the Society for Endocrinology and the Royal College of Physicians (RCP), the annual workforce survey, in its current form, aims to find out where the nation's diabetes and endocrine consultants work and the type of job plan they have. At the age of 13 (and probably a little later than its human teenage contemporaries), the survey is about to enter the world of the internet and go online!

PEN AND PAPER

Currently, an annual paper survey is sent to all identified consultants, asking some basic demographic questions, a few details about their job plan, and also if any new colleagues have joined their department in the previous year. This has, in theory, allowed us to track new appointees and any consultants that have moved Trusts. These new consultants are subsequently sent questionnaires asking them about their roles.

There have been workforce surveys for many years reporting to Diabetes UK (or the British Diabetic Association as it was then), but the first survey report to the four societies was produced by Dr Nick Morrish, who was succeeded by Dr Dinesh Nagi some years later. I took over the survey last year, producing my first report from the 2015 returns. Reports are filed annually and are available on all the sponsoring societies' websites as well as being presented at the Diabetes UK annual professional conference and one of the two ABCD meetings held every year.

INEVITABLE SHORTCOMINGS

As with all surveys, returns are suboptimal and the information provided is not always complete, which has led to the need to triangulate the data with other sources, such as the RCP workforce survey, the Joint Royal Colleges of Physicians Training Board (JRCPTB) and the *BMJ* and NHS job adverts. This is a hugely time consuming task, so far carried out manually, and (having done it once) my admiration goes to both my predecessors and their assistants who have done this for years!

IMPORTANT STRENGTHS

Although sometimes incomplete, the information that has been gleaned through this survey has been invaluable. It allows us to see whether the provision of consultants is adequate or, indeed, inadequate at the level of full time equivalents (FTEs) of consultants. We can see region by region where the numbers fall below recommended levels per head of population.

An example of the type of information available in the report is shown in the Table. This

'The results can be used as leverage to commission further services if needed, and the societies can use the data to lobby for improvement of provision'

has been generated with data from the RCP, showing the number of consultants per region.

The results can be used as leverage to commission further services if needed, and the societies can use the data to lobby for improvement of provision. It allows us to track the ages of the consultant body and predict retirements to a certain extent. In addition, with new posts created, we can provide trainees with information about their future job prospects.

CONTINUED ON PAGE 32...

Number of consultants per region using RCP data from 2014. LETB, local education training board; FTE, full-time equivalent Credit: RCP Workforce Unit

LETB or region	No. of consultants	No. of FTEs	Population per FTE	FTEs per 100,000 population
Yorkshire and the Humber LETB	76	75.1	70,217	1.42
West Midlands LETB	79	78.3	72,939	1.32
Wessex LETB	28	26.9	118,370	0.84
Wales	41	40.0	77,386	1.29
Thames Valley LETB	21	20.6	113,538	0.88
South West LETB	52	49.5	87,247	1.14
South London LETB	49	47.9	66,673	1.49
Scotland LETB	96	93.6	57,135	1.75
Northern LETB	38	37.6	78,321	1.27
Northern Ireland	22	22.0	83,756	1.19
North West London LETB	36	35.6	57,182	1.75
North West LETB	92	90.8	75,955	1.31
North East and Central London LETB	54	52.6	62,941	1.59
Kent, Surrey and Sussex LETB	40	39.0	114,280	0.87
Jersey	1	1.0	99,500	1.01
East of England LETB	65	63.1	95,308	1.04
East Midlands LETB	43	41.7	111,291	0.89
Grand total*/average†	833*	815.2*	79,445†	1.16†

...CONTINUED FROM PAGE 31

THE DAWN OF THE DIGITAL ERA

My ambition upon taking on the survey was to transfer it to the digital age and so its transition has begun. This will allow the data collection to become easier, and hopefully more accurate.

After assessing several options and seeking agreement from the commissioning societies, it has been agreed that data collection will be performed using the existing infrastructure available at the RCP workforce unit. This will allow the very quick transfer of the survey onto an online platform.

'We hope that we will be able to look at subspecialty interests, community and academic work, and all the other work that our specialty does without, it seems, much recognition'

It gives us the opportunity to revisit the questions that are asked, to extend the scope of the survey to allow us to interrogate the data more closely, and to provide reports with more granularity. We hope that we will be able to look at subspecialty interests, community and academic work, and all the other work that our specialty does without, it seems, much recognition. It will allow some of the demographic data to come pre-filled, saving time for respondents. Selfishly, it will hopefully make the process of analysis much easier for me and my successors!

We also hope that, by modernising the survey and making it easier to respond, we will get a much higher response rate than we have thus far.

We are currently finalising the questions and the survey should be pinged into an inbox near you by the end of the year! Please do take the time to complete it, and I hope next year's report will make interesting reading for you all.

STELLA GEORGE

RCP/ABCD/SfE/DUK Workforce Co-ordinator and Consultant in Diabetes and Endocrinology, East & North Hertfordshire NHS Trust
Twitter: @svmdoc

NURSES' NEWS

LISA SHEPHERD

NURSE COMMITTEE CHAIR



With summer over (yes, we did have one) and the arrival of darker evenings, my mind turns to the forthcoming Society for Endocrinology BES conference, which will be held in Brighton.

Our article for this issue (on page 33) has been written by Alison Milne from Aberdeen. In it, she shares her perspective on attending the conference and the opportunities it holds for nurses. Alison highlights the evolving role of endocrine specialist nurses and the importance of maintaining current evidence-based practice. The SfE BES programme caters for nurses new to endocrinology and also for the more experienced practitioners amongst us. We should not forget the importance of collaborating and networking with our colleagues, which allows us to compare and develop our practice.

Several UK nurses recently presented at the 17th International Congress of Endocrinology in collaboration with the 15th Annual Meeting of the Chinese Society of Endocrinology (ICE-CSE 2016), on 31 August-4 September in Beijing, China. This was the first time a nurse programme had been developed for this meeting, and it was the result of a global nursing collaboration: the Federation of International Nurses in Endocrinology (FINE; www.endo-nurses.org/ FINE). We look forward to on-going collaboration and participation with this group, improving international nurse practice and patient care.

I hope you enjoy the opportunity to attend SfE BES 2016 in Brighton. Members of the Society's Nurse Committee are looking forward to welcoming you. If you would like to present your work or share your ideas for future programmes, please let one of them know.

LISA SHEPHERD



WHAT YOU CAN EXPECT AT SfE BES 2016: A NURSE'S PERSPECTIVE

WRITTEN BY ALISON MILNE

Hello! I have been an Endocrine Specialist Nurse for many years, and recently joined the Society for Endocrinology Nurse Committee. I was asked to write this article to share my experience of attending the annual Society for Endocrinology BES conference with you.

Endocrine Specialist Nurses are no different from other nursing specialities (although I would argue we are a special breed!). Like others, we have to constantly keep ourselves up to date, not only in our own field of expertise, but in all current best nursing practice and mandatory training courses. We, too, are under pressure to ensure we have the necessary training and development to fulfil the recommendations for our revalidation.

WHY YOU SHOULD ATTEND

Opportunities for us to attend relevant courses or study days (which are limited in our field) can be fraught with endless difficulties – least of all getting the time away from our busy clinics. We are constantly developing our roles and taking on new responsibilities. In many cases, we are working in isolation and do not have the luxury of a team of nurses or colleagues with whom to discuss issues. This is why attendance at the Society for Endocrinology BES conference can really help you.

OVERCOMING INITIAL DOUBTS

I must admit that when I first thought about attending, and looked at the programme, I wondered if it was for me! I feared it was very advanced and scientific, and might not benefit me other than through the dedicated nurse sessions.

This fear, I can honestly say, was completely unfounded. By carefully looking at the programme, I was able to identify many sessions and lectures of interest to me and fellow nurses. Indeed, sometimes you will have to choose between sessions, as it is not always possible to attend everything.

NURSES' SESSIONS

The dedicated nurses' sessions are chaired and led by nurses, and usually concentrate on a specific theme or topic with case presentations. We also invite medical experts in our chosen topic to come and share their knowledge with us. The sessions are intended to be informative and educational, and they give us the opportunity to present our own work/case studies in a friendly setting, if we so wish.

Along with the varied programme, the conference will give you the opportunity to network with other nurses and medical staff. Indeed, last year saw a dedicated nurses' area and lounge for the first time, which gave nurses their own space to meet and get together. This is especially beneficial when you are travelling on your own, or if you are a first-time attendee, as there is nearly always somebody there to chat to. At designated break times there is at least one member of the Nurse Committee on hand for you to get to know.

AROUND THE CONFERENCE

The commercial exhibition hall is usually a great gathering place, including all the leading pharmaceutical companies, patient groups and advisers. They provide useful and up-to-date information and literature that can help you with the day-to-day running of your clinic and ultimately benefit your patients.

There is also a fantastic poster display, which is attended at certain times by the posters' authors, again enabling nurses to network and chat with colleagues. Nurses are always encouraged to display their work, so you should take advantage of this additional opportunity and get credit for your hard work.

Sessions such as 'How do I?' and 'Meet the Expert' are usually excellent and informative. Here are some examples of what is on offer this year in Brighton, which may be of particular interest to us as nurses. They will be presented by endocrinologists from the UK and further afield:

- Quality of life in patients with pituitary disease
- Normocalcaemic hyperparathyroidism – treat or discharge?
- Low testosterone and normal gonadotrophins: who, when and how to treat?
- Adrenal crisis and outcome of Addison's disease
- How do I approach drug-induced hyperprolactinaemia?
- How do I rule out insulinoma?
- How do I titrate testosterone therapy?
- How should I counsel a young woman with PCOS about fertility?
- How long should I treat prolactinoma?

'I was able to identify many sessions and lectures of interest to me and fellow nurses. Indeed, sometimes you will have to choose between sessions, as it is not always possible to attend everything'

Last, and by no means least, there is always the opportunity to socialise. This starts with the Welcome Reception, which will help make you feel part of this special event and is a chance to meet new colleagues, who in time will become friends.

As the years pass and your knowledge increases, the Society for Endocrinology BES conference will offer you so much, and you will continue to benefit, no matter how junior or senior you are.

This is a very special year for the Society, as it celebrates 70 years of drawing endocrinologists together, and advancing scientific and clinical research and education, as well as bringing endocrinology to a wider audience. Hopefully it will draw more people than ever, especially nurses, to its annual conference in November in Brighton.

I hope to see you there!

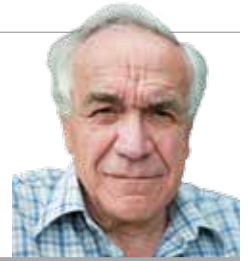
ALISON MILNE

Endocrine Specialist Nurse, Aberdeen Royal Infirmary and The Pituitary Foundation

The Society for Endocrinology BES conference is taking place in Brighton, UK on 7–9 November 2016. You can find more information and register to attend at www.endocrinology.org/meetings/2016/sfebes2016.

MEDAWAR'S DICTUM ON ENDOCRINE EVOLUTION: A CASE OF MISTAKEN IDENTITY?

WRITTEN BY MALCOLM PEAKER



Peter Medawar
©Wellcome Library London

Sir Peter Medawar OM FRS (1915–1987) is best remembered for his Nobel prize-winning discovery of acquired immunological tolerance and for bringing to the attention of scientists the empirical falsification philosophy of Sir Karl Popper CH FRS (1902–1994). However, he also considered the endocrine system and produced the famous dictum: ‘For “endocrine evolution” is not an evolution of hormones but an evolution of the use to which they are put.’

Comparative endocrinology was a major area of research in the decades after the Second World War. The main questions being asked were:

- how do endocrine organs differ?
- which hormones are produced?
- what are the effects of hormones in physiological processes in different animals?

Medawar's dictum appeared in a paper on viviparity at a meeting on evolution at Oxford in July 1952 (published in 1953).¹ Medawar built his argument as he considered the role of the endocrine system in viviparity and the inherent immunological problem of gestation. Earlier in the paper, Medawar wrote:

‘Not even the possession of “prolactin” then can be said to be distinctive of mammals; what is distinctive of mammals is the evolution of a new mode of tissue response to hormones of a category already in being. In discussing the comparative endocrinology of the adrenal gland it will be urged that this is a generally applicable rule.’

‘Jimmie Dodd reported to Medawar, “Your now famous 1953 dictum was frequently mentioned at the symposium.” However, Medawar’s name did not appear in any of the lists of references appended to the 43 papers when they were published.’

But was Medawar's realisation in 1952 an original one? The notion that Frederick Lee Hisaw (1891–1972) of Harvard (Cambridge, MA, USA), the discoverer of relaxin, had the idea first has gained credence to an extent such that the dictum is either ascribed to both Medawar and Hisaw or even just to Hisaw.

Ian Chester Jones (1916–1996), the leading but ultimately under-rewarded driver of comparative endocrinology in the UK, first in Liverpool and then in Sheffield, wrote in his 1976 Dale Medal Lecture to this Society:²

‘Geschwind (1967) found some value in the dictum which he quoted without reference. Perhaps rightly so, as it is, in a sense, part of the folklore of endocrinology. In a discussion at the 3rd International Symposium of Comparative Endocrinology in 1961 at Oiso, Japan, I declared the aphorism and with some degree of national pride. However, I ran into trouble as Carroll Williams [Carroll Milton Williams, 1916–1991, the first to isolate insect juvenile hormone and ecdysone] said Medawar must have picked it up at Harvard as it tripped lightly off Fred Hisaw's tongue many a long year before...’

My interest was evoked when I put up a slide of Medawar's dictum at a lecture I gave in 1998. Attribution of it to Hisaw was raised and so I looked at all the papers written by Hisaw before Medawar's talk in 1952. I found nothing. Thanks to the Wellcome Trust, Medawar's correspondence is online³ (including that with Hisaw) and it is quite clear that Medawar regarded his dictum as his and his alone. In a letter to James Munro ‘Jimmie’ Dodd FRS (1915–1986), of hypothalamo-pituitary axis fame, he referred to it as ‘my impertinent generalisation’.

The reason why Medawar was writing to Dodd was to get sight of some of the papers given at the second symposium on comparative endocrinology held at Cold Spring Harbor (NY, USA) in 1958. Jimmie Dodd reported to Medawar, ‘Your now famous 1953 dictum was frequently mentioned at the symposium.’ However, Medawar's name did not appear in any of the lists of references appended to the 43 papers when they were published.

It is in Hisaw's paper at that meeting that I see the basis for the confusion between Medawar and Hisaw, and even attribution to Hisaw. The paper ends: ‘...to the generalization which states in effect that *it is not hormones which have evolved but the uses to which they are put.*’ Note the italics here indicating a quotation.

Medawar's words were, for comparison, ‘For “endocrine evolution” is not an evolution of hormones but an evolution of the use to which they are put.’ It is clear that Hisaw was quoting Medawar without mentioning him by name in the text or giving any form of reference to the quotation.

It is not then, perhaps, surprising that those following took Hisaw's words, in italics but in fact a partial paraphrase of Medawar's, to mean that he, Hisaw, had come up with the idea rather than, or as well as, Medawar. But Hisaw in that paper was actually disagreeing with the dictum! Later, according to a biography of Hisaw, he did develop the idea in relation to oestrogens in invertebrates, but that was in the 1960s, a decade after Medawar.

There are other twists in this story which space does not permit me to expand upon. However, the currently available evidence indicates that Medawar's famous dictum was Medawar's and his alone.

MALCOLM PEAKER

Malcolm Peaker FRS was Director of the Hannah Research Institute until he retired in 2003.

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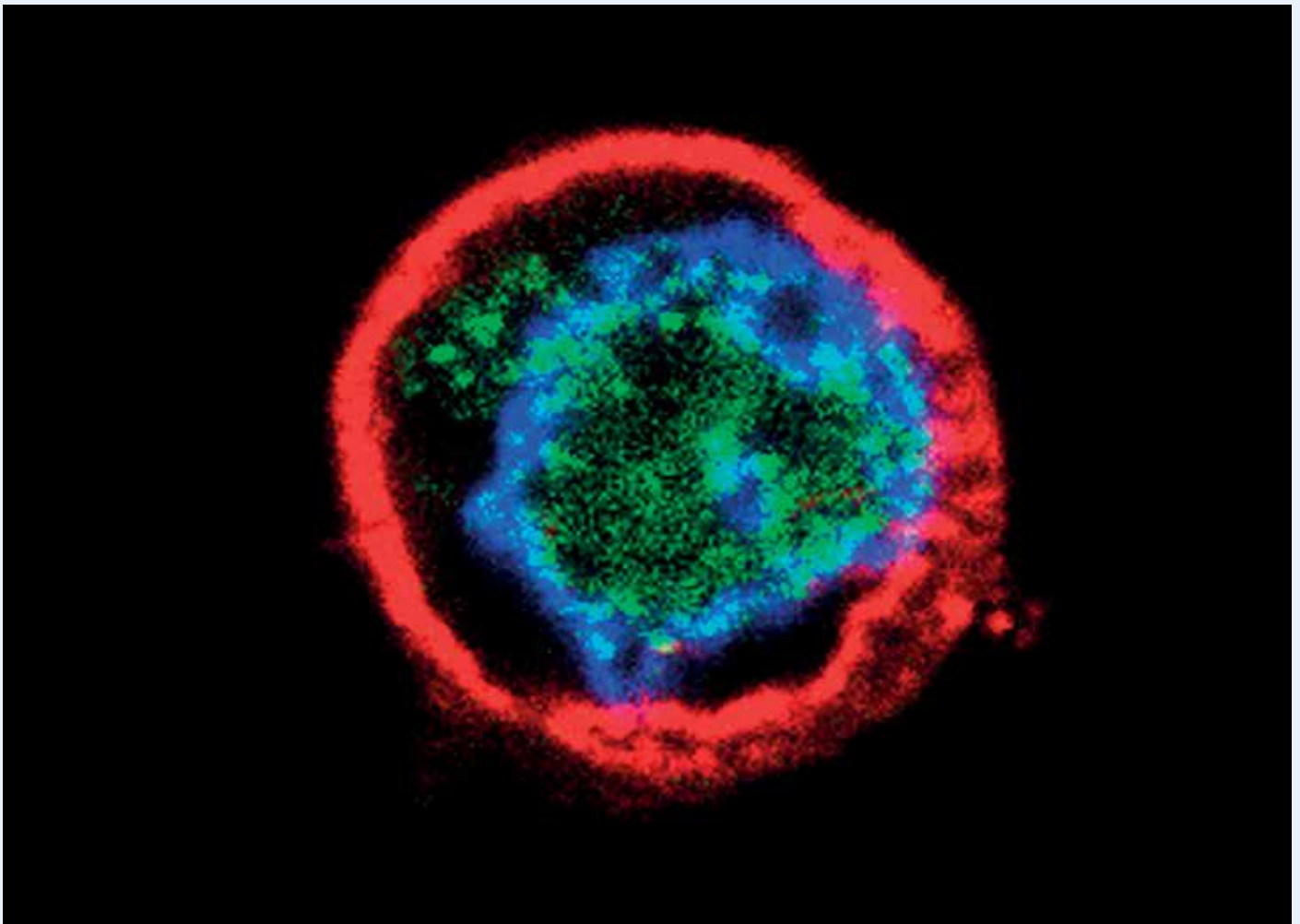
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JUNE 2016

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RETURNS SERUM TESTOSTERONE LEVELS TO NORMAL IN 1.13 DAYS⁴

HALF THE GEL REQUIRED

VERSUS TESTOGEL[®] AT
EQUIVALENT DOSE^{1,2}



CONVENIENT 60G CANISTER FOR REDUCED MESS/WASTAGE¹

ELIMINATES THE NEED FOR
MULTIPLE TUBES OR SACHETS



For 20 days treatment, patients on Tostran (60mg per day) need only 1 canister¹; patients on Testogel[®] (50mg per day) need 20 sachets²

©Testogel is a registered trademark of Besins Healthcare, Belgium

RX TOSTRAN[®] 2% TESTOSTERONE GEL BY BRAND - THE ONLY 2% TESTOSTERONE GEL AVAILABLE IN THE UK¹

Tostran[®] (testosterone) 2% Gel

Prescribing Information

Please refer to the full Summary of Product Characteristics before prescribing

Presentation: Tostran 2% Gel, contains testosterone, 20 mg/g. **Indication:** Testosterone replacement therapy for male hypogonadism when testosterone deficiency has been confirmed by clinical features and biochemical tests. **Dose:** The starting dose is 3 g gel (60 mg testosterone) applied once daily to clean, dry, intact skin, on the abdomen or to both inner thighs. Adjust dose according to clinical and laboratory responses. Do not exceed 4 g of gel (80 mg testosterone) daily. Apply after washing, bathing or showering. Do not apply to the genitals. Do not use in women, or children under the age of 18 years. **Contraindications:** Known or suspected carcinoma of the breast or the prostate; hypersensitivity to any of the ingredients. **Special warnings and precautions for use:** Not to be used to treat non-specific symptoms suggestive of hypogonadism

if testosterone deficiency has not been demonstrated and if other aetiologies have not been excluded. Not indicated for treatment of male sterility or impotence. Monitor testosterone at regular intervals. Adjust dose to maintain eugonadal testosterone level. Experience in patients over 65 years is limited, account for lower serum testosterone with increasing age. Pre-examine all patients to exclude a risk of pre-existing prostatic cancer. Perform regular monitoring of breast and prostate. Androgens may accelerate the development of subclinical prostatic cancer and benign prostatic hyperplasia. Monitor haemoglobin, and haematocrit, liver function tests and lipid profile during long-term use. Oedema with/without congestive heart failure may be a severe complication in patients with pre-existing severe cardiac, renal, or hepatic insufficiency, or ischaemic heart disease. Discontinue immediately if such complications occur. Use with caution in hypertension, epilepsy, migraine and sleep apnoea as these conditions may be aggravated. Care should be taken with skeletal metastases due to risk of hypercalcaemia/hypercalcaemia.

Androgen treatment may result in improved insulin sensitivity. Inform the patient about the risk of testosterone transfer and give safety instructions. Health professionals/careers should use disposable gloves resistant to alcohol. **Side-effects:** Very common: Application site reactions (including pruritus, soreness, pruritis, rash or erythema). Common: Increased haemoglobin, red blood cell count, and haematocrit, increased male pattern hair distribution, hypertension, gynaecomastia, peripheral oedema, and increased PSA. May cause irritation and dry skin. Prescribers should consult the summary of product characteristics for further details of side-effects. **Legal Category:** POM. **Further information is available from the Marketing Authorisation Holder:** Kyowa Kirin Ltd, Galabank Business Park, Galashiels, TD1 1QH, UK. **Date of Prescribing Information:** May 2016.

Adverse Events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Kyowa Kirin Ltd on +44 (0)1896 664000, email medinfo@kyowakirin.com

References: 1. Tostran[®] Summary of Product Characteristics. 2. Testogel[®] Summary of Product Characteristics. 3. Testim[®] Gel Summary of Product Characteristics. 4. Mogenthaer A, et al. Steady-state pharmacokinetics. SRSNA Annual meeting 2011.

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KYOWA KIRIN

